



CHATHAM HOUSE

Chatham House, 10 St James's Square, London SW1Y 4LE  
T: +44 (0)20 7957 5700 E: [contact@chathamhouse.org](mailto:contact@chathamhouse.org)  
F: +44 (0)20 7957 5710 [www.chathamhouse.org](http://www.chathamhouse.org)

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# Climate Change and Africa: Turning Up the Heat

**Bob Dewar CMG**

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## Executive Summary

Emissions reduction pledges may well not prevent the world from warming by 3–4°C. Delivery of commitments has been slow: the global economic crisis has sapped political will to think long-term or beyond national interests. The impacts for Africa in particular are likely to be wide-ranging, even though the crisis is not of Africa's making, and most countries there have low emission levels.<sup>1</sup>

There are positive opportunities for Africa, however. Decisions at the Durban climate change conference in 2011 exceeded many expectations. The June 2012 Rio Sustainable Development summit neither undermined Durban nor increased pressure for action. But follow-up and implementation, including at the COP 18 climate change conference in Doha in November–December 2012, is important. Africa needs international support – and domestic action – now.

Africa is especially vulnerable to climate change. Although continent-wide plans to combat its impacts emerged only recently, some visionary African leaders have produced innovative lower-carbon country strategies, providing a platform for decision-makers to turn complex problems into opportunities.

With pragmatic contributions from key African delegations, Durban launched a process involving all countries in moving towards a new legal framework by 2015 (for implementation from 2020) and a second commitment period of the Kyoto Protocol. There were efforts to help Africa, including streamlining Clean Development Mechanism procedures. While funding remains to be designed and identified for many key initiatives, these were given the green light for further refinement or implementation (Technology Mechanism, Green Climate Fund, REDD+).

African interests lie in international follow-up *and* energetic domestic action, working multilaterally to ensure all parties to Durban keep to their commitments and – regionally and domestically – prioritizing climate change considerations through appropriate planning frameworks and projects. Heads of state and finance, environment and planning ministers can lead by example, mainstreaming climate change considerations into continental, national and sub-national decision making, while producing and implementing programmes for inclusive climate-resilient green growth. These include:

- planning for lower-carbon growth models (including in hydrocarbons sectors), investing in renewable energy (hydro, geo-thermal, solar, wind) with policy frameworks that encourage private-sector and development partners while respecting the interests of local communities;
- adapting to sustainable climate-resilient (and smart) agriculture and water management for 'green' markets;
- preventing deforestation and forest degradation;
- attracting new low-carbon green industries, leapfrogging technology, helped by new innovative climate finance and support from developed and emerging nations, while retrofitting existing mines and industries; and
- taking measures to address disaster risk within economic and fiscal policy, and in sector-based economic and land-use planning.

African leadership, 'ownership' at all levels and genuine partnership are needed if initiatives are to be truly effective and sustainable.

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<sup>1</sup> Christiana Figueres, Executive Secretary UN Framework Convention on Climate Change, Statement at the 14th Session of African Ministerial Conference on Environment, Arusha, 13 September 2012. [http://unfccc.int/files/press/statements/application/pdf/amcen\\_arusha\\_13\\_sept\\_final.pdf](http://unfccc.int/files/press/statements/application/pdf/amcen_arusha_13_sept_final.pdf)

## Introduction

The UN Framework Convention on Climate Change (UNFCCC) Conference of Parties (COP 17) in Durban at the end of 2011 helped focus attention as never before on the actual and potential impact of climate change on the African continent.<sup>2</sup> Durban's 'success' was heavily influenced by some pragmatic and reformist African participants, signalling the importance of the issue for African countries and their development.

Whatever the judgment on Durban's achievements, its outcome kept the international door open by launching a process involving all countries towards a new legal framework and by temporarily extending the Kyoto Protocol. The Rio+20 Summit in June 2012, which put the spotlight on how to build green economies to benefit the poor, also drew some attention on the adverse effects of climate change on development, including in Africa, 20 years after the original Earth Summit.<sup>3</sup>

These conferences encouraged follow-up by African countries domestically and multilaterally. African understanding, analysis and policy action on the challenges posed by climate change has moved forward over the last two decades. There are options for countries, collectively and individually, to adapt to and mitigate the impacts at home. They can also leverage their acknowledged special vulnerability to encourage developed and emerging countries to act wisely, including through the implementation of the Durban commitments.

### Box 1: Grim statements about Africa's vulnerability

In Durban, the UNFCCC Executive Secretary, Christiana Figueres, said that 'obviously, Africa is one of the regions most affected by climate change'.<sup>4</sup> She spoke of a fragile nexus of food, water and climate. South African President Jacob Zuma had said much the same at the prior G20 summit in Cannes when urging developed nations to finance the Green Climate Fund: 'Africa is the hardest hit by climate change', whether through sea-level rise, severe floods and drought or current poverty levels. In Durban he said the issue was one of 'life and death' for most people in the developing world and Africa.<sup>5</sup> The late Prime Minister Meles Zenawi of Ethiopia said Africa was already severely affected: 'the lives of millions of Africans are at stake as the extraordinary drought in the Horn of Africa shows.'<sup>6</sup> The Democratic Republic of Congo's Minister for Environment, José Endundo, acting as the spokesman for the African group, said most African countries faced negative phenomena linked to climate change and warned of human pressures on the Congo Basin tropical forest.<sup>7</sup> Speaking for the Least Developed Countries, Gambia's Minister of Forestry and Environment, Jato Sillah, said: 'we did not cause climate change. We are being left almost alone to face its impacts.'<sup>8</sup> The African Development Bank president, Donald Kaberuka, said that 'the greatest calamities facing humanity this century are global poverty and climate change. It is pertinent therefore that we are meeting in Africa.'<sup>9</sup>

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<sup>2</sup> UN Framework Convention on Climate Change Conference of Parties, 28 November–9 December 2011, [http://unfccc.int/meetings/durban\\_nov\\_2011/session/6294.php](http://unfccc.int/meetings/durban_nov_2011/session/6294.php).

<sup>3</sup> 'The Future We Want: Outcome Document of the United Nations Conference on Sustainable Development, Rio + 2', <http://sustainabledevelopment.un.org/futurewewant.html>.

<sup>4</sup> Christiana Figueres, UNFCCC Executive Secretary, Q&A Session at UN Climate Change Conference, Durban, November 2011.

<sup>5</sup> President Jacob Zuma, G20 Summit, Cannes, 4 November 2011.

<sup>6</sup> Prime Minister Meles Zenawi, Remarks, 6 December 2011, Durban.

<sup>7</sup> Statement by José Endundo, Minister for Environment, Nature Conservation and Tourism, DR Congo.

<sup>8</sup> Statement by Jato Sillah, Minister of Forestry and Environment, Gambia.

<sup>9</sup> Statement by African Development Bank President Donald Kaberuka.

## Climate impacts on Africa

International and African research into the potential impacts of climate change on development in Africa has been growing steadily. According to the Intergovernmental Panel on Climate Change (IPCC), climate extremes, exposure and vulnerability are influenced by a wide range of factors, including anthropogenic pressures, natural climate variability and socioeconomic development.<sup>10</sup> Africa's particular vulnerability to climate variability and change is compounded by the interaction of 'multiple stresses' and low adaptive capacity. Agriculture is sensitive to climate change.<sup>11</sup> While some adaptation to current climate variability has been taking place, it is questionable if this is sufficient to cope with future changes in climate – including 'more vigorous hydrological cycles' causing potential droughts and floods.<sup>12</sup>

The Stern Review described a wide range of potentially severe threats to Africa, including pressures on semi-arid and drier zones, increased risks of hunger and disease in some areas, increased water stress, reduced availability or pressures in others if weather became more erratic, and sea-level rise damage in some coastal cities and areas.<sup>13</sup> Most African countries have low emission levels.<sup>14</sup> The crisis is not of Africa's making but its impacts are wide-ranging. The African Union Commission, addressing the African Union (AU) summit on 18 January 2007,<sup>15</sup> complemented Lord Stern's presentation to heads of state with an analysis that included mapping the 'disappearing glaciers' of Mount Kilimanjaro and 'a dying Lake Chad' (see also Figures 2 and 3 below). It told African heads of state of the need to integrate climate change into development, citing climate change impacts of crop failure and livestock loss, low reservoir levels, infrastructure damage, health services affected, public safety threatened by storms and damaged ecosystems.

Other experts have also outlined the likely severity of the direct effects of climate change on Africa.<sup>16</sup> Attention has been given to the risk of adverse effects on livelihoods of farmers and pastoralists in many areas, who already contend with multiple development challenges, from increased water stress to possible drop in agriculture production and yields from rain-fed lands. The area suitable for agriculture, the length of growing seasons and yield potential, e.g. along the margins of semi-arid and arid areas, might decrease, potentially exacerbating malnutrition and food security. The proportion of arid (See Figure 1) and semi-arid lands might increase. Multiple stresses are exacerbated by prolonged droughts, floods, etc. Eco-systems and biodiversity are under threat from climate variability or change, although other factors also play their part.

Not all climate changes are projected to be negative for agriculture everywhere, however, and increased temperature and rainfall changes might lengthen the growing season in certain areas, e.g. parts of the highlands in Eastern Africa and Southern Africa. Several experts caution against over-interpretation of results owing to the limitations of some of the projections and models used.

Fisheries resources in large lakes, already affected by over-fishing, are also projected to decrease because of rising water temperatures. Towards the end of the 21st century, projected sea-level rise could affect low-lying coastal areas with large populations. The cost of adaptation could amount to at least 5–10% of gross domestic product (GDP). Mangroves and marine coral reefs are projected to be further degraded, with additional consequences for fisheries and tourism.

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<sup>10</sup> Special Report of the Intergovernmental Panel on Climate Change (IPCC), 'Managing the risks of extreme events and disasters to advance climate change adaptation', 2012.

<sup>11</sup> IPCC, 4th Assessment Report, 2007, Ch. 9, [www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter9.pdf](http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter9.pdf).

<sup>12</sup> Godwin Obasi (former Secretary General, World Meteorological Organization), 'Preface', in Pak Sum Low (ed.), *Climate Change and Africa* (Cambridge University Press, 2005), [http://assets.cambridge.org/97805218/36340/frontmatter/9780521836340\\_frontmatter.pdf](http://assets.cambridge.org/97805218/36340/frontmatter/9780521836340_frontmatter.pdf).

<sup>13</sup> Stern Review, *The Economics of Climate Change*, 2006.

<sup>14</sup> Christiana Figueres, UNFCCC Executive Secretary, Statement at the 14th Session of African Ministerial Conference on Environment, Arusha, 13 September 2012. [www.amcen\\_arusha\\_13\\_sept\\_finalxxx](http://www.amcen_arusha_13_sept_finalxxx).

<sup>15</sup> African Union Commission, presentation on 'Managing Climate Change for Africa's Development: Challenges and Opportunities', 18 January 2007.

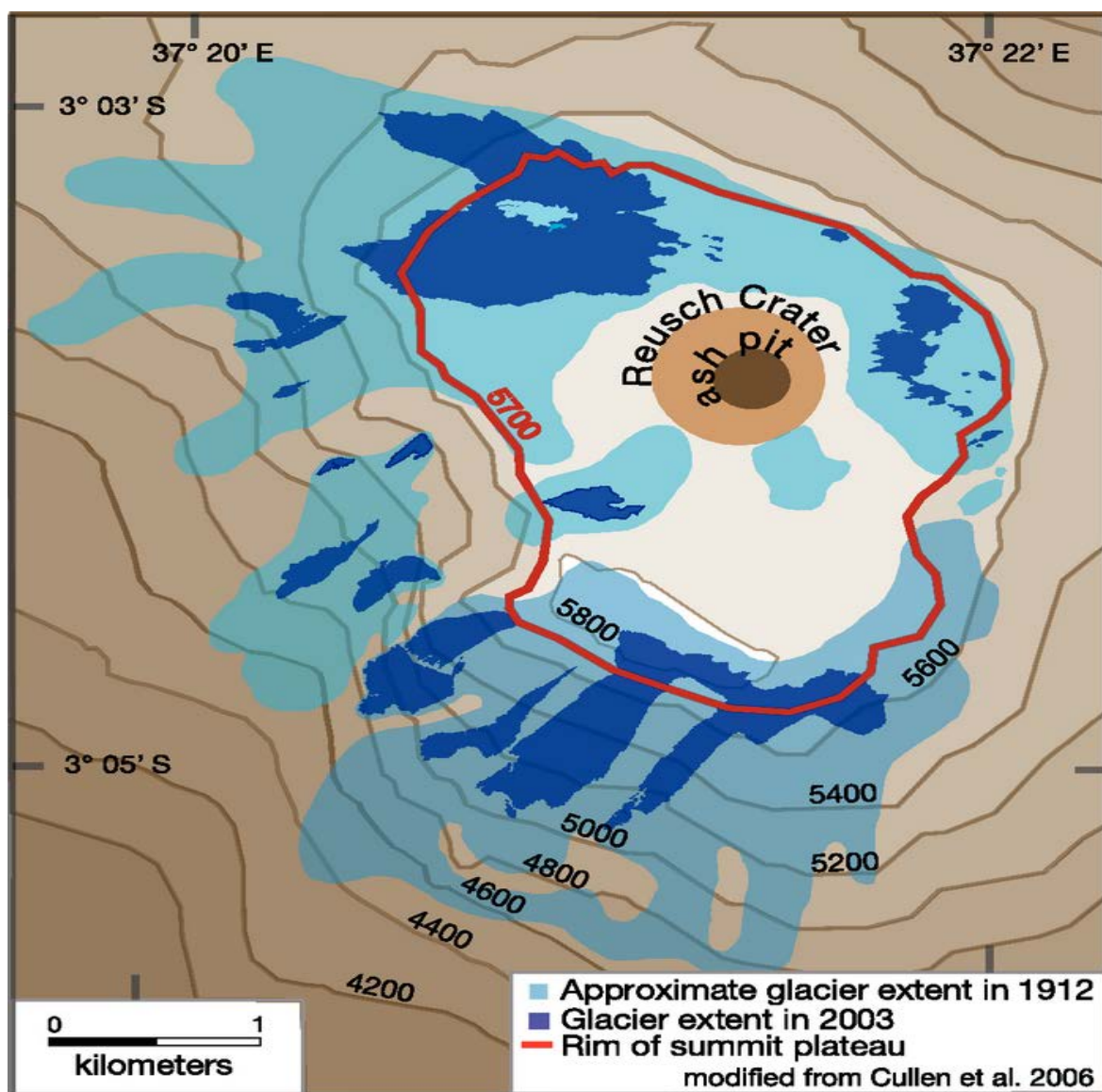
<sup>16</sup> Paul Collier, Gordon Conway and Tony Venables, 'Climate Change and Africa', *Oxford Review of Economic Policy*, 24 (2), 6 May 2008, [economics.ouls.ox.ac.uk/11282/1/ClimateChangeandAfrica.pdf](http://economics.ouls.ox.ac.uk/11282/1/ClimateChangeandAfrica.pdf)

Trends in disaster risk indicate that economic exposure to disasters doubled in sub-Saharan Africa between 1980 and 2010, although the warning about limited accuracy of assessments in Africa is again given (models used do not capture endemic or extensive risks well, e.g. from food security or slow-onset disasters such as those associated with drought).<sup>17</sup>

Climate change is judged to have a particular impact on women in developing countries.<sup>18</sup> Given the link with infectious disease in some circumstances, the need for health professionals to have better climate information has been stressed.<sup>19</sup>

The IPCC suggests there is evidence that climate change – together with other drivers of change – is modifying natural mountain eco-systems via complex interactions and feedbacks, including on Mt Kilimanjaro.

**Figure 1: Decrease in surface area of Mt Kilimanjaro glaciers from 1912 to 2003**



<sup>17</sup> Climate Change and Development Knowledge Network, 'Tackling Disaster Risk Management at the Heart of National Economic and Fiscal Policy', May 2012, [cdkn.org/2012/05/](http://cdkn.org/2012/05/)

<sup>18</sup> UNEP, 'Women at the Frontline of Climate Change', 6 December 2011.

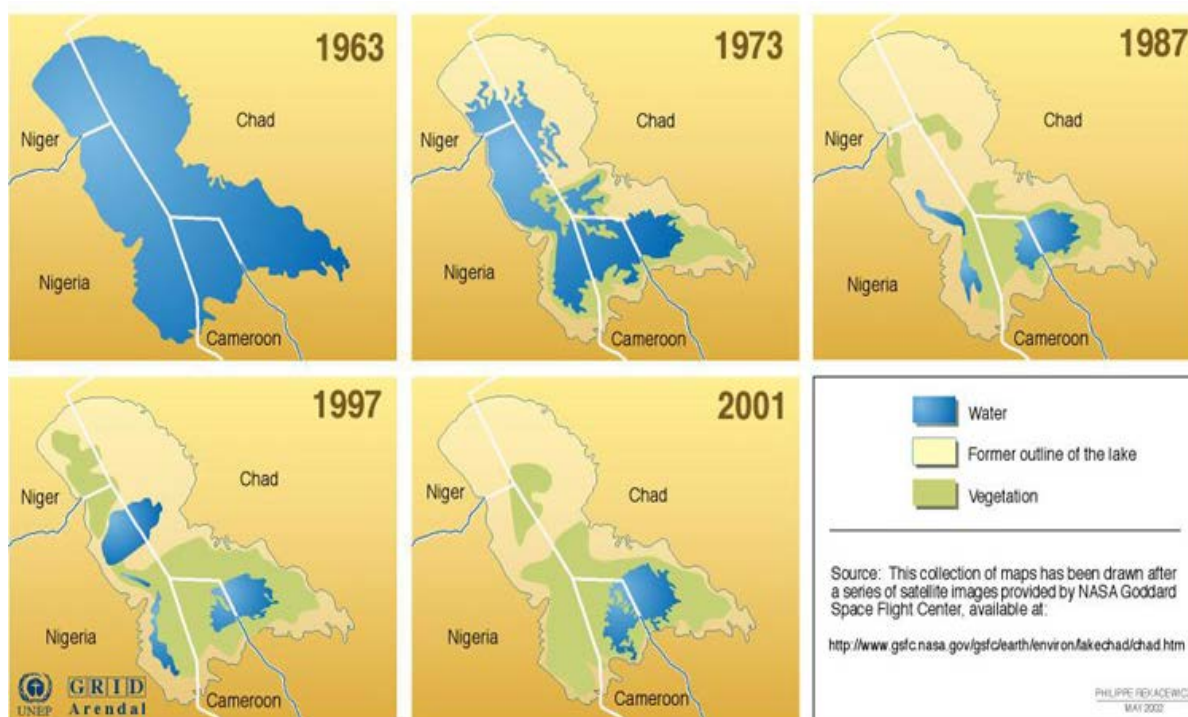
<sup>19</sup> Madeleine Thomson, 'Africa Needs Climate Data to Fight Disease', *Nature*, 24 March 2011.



Source: Modified from Cullen et al. (2006) in Ch. 9 of M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, eds, *Africa. Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, pp. 433–67.

It can also be argued that the steady shrinkage of Lake Chad over time is caused by anthropogenic and climate change factors (see Figure 2).<sup>20</sup>

**Figure 2: Progressive shrinkage of Lake Chad over the last four decades**



Source: United Nations Environmental Programme (UNEP), *vital climate graphics Africa*, using NASA images.

Despite the growing amount of research, the challenge for experts working in Africa remains to produce better data, analysis and planning. Against a background of ever greater competition for basic resources – food, water, energy – climate change multiplies the stress on livelihoods and socio-economic prosperity, eco-systems, agricultural production and food security, fisheries, health, water (availability, accessibility and demand), sanitation and infrastructure. Its impact on the poorest and most vulnerable is disproportionate. In addition there are concerns for migration – or ‘environmental refugees’ from impacts of severe weather<sup>21</sup> – as well as for security<sup>22</sup> ‘including ecological sustainability which may result in human rights abuses and intra or inter-state conflict

<sup>20</sup> Freedom Onuoha, ‘Climate Change, Population Surge and the Resource Overuse in the Lake Chad Area’, in Donald Mwiturubani and Jo-Ansie van Wyk (eds), *Climate Change and Natural Resource Conflicts in Africa* (Institute for Security Studies, 2010, <http://www.isn.ethz.ch/isn/Digital-Library/Publications/Detail/?ots591=0c54e3b3-1e9c-be1e-2c24-a6a8c7060233&lng=en&id=117764>).

<sup>21</sup> Norman Myers. ‘Environmental Refugees: A Growing Phenomenon of the 21st Century’, *Philosophical Transactions of the Royal Society B* 357 (1420) (2002).

<sup>22</sup> Martina Brutinel, ‘Climate Change and International Security and the Example of Darfur’, E3G, 2007, <http://www.e3g.org/programmes/climate-articles/climate-change-international-security-and-the-example-of-darfur/>.

and wars'.<sup>23</sup> While some dispute the 'conflict-environment hypothesis',<sup>24</sup> severe climate change impacts can put strain on institutions, exacerbate competition for resources or make conflicts more difficult to deal with.

## Conflicting responses from Africa?

African countries have differing and sometimes conflicting interests and needs. This has influenced the pace of progress on the agenda in the continent. While all African states joined the major international environmental treaties, including the 1992 Climate Change Convention, a continent-wide climate change regime was introduced only relatively recently, in 2007. The original UNFCCC made no specific mention of Africa<sup>25</sup> – its interests were promoted through other negotiating groups – but it called for states vulnerable to climate change to be assisted.

Although the African Union and its predecessor, the Organization of African Unity (OAU), paid attention to environmental challenges, including desertification, and while many African leaders were aware of the continent's vulnerability to climate change, the AU's Declaration on Climate Change and Development in Africa adopted at its summit in January 2007 was the first common view by heads of state on the climate change issue taken broadly.<sup>26</sup>

The declaration called for member states to ratify Kyoto; participate in the UNFCCC; build capacity and invest in data collection and early-warning systems; integrate adaptation strategies into country policies; raise awareness; strengthen cooperation between national meteorological offices, hydrological centres and regional economic communities (RECs); strengthen research, especially in renewables, forestry and agriculture to increase resilience; transfer technologies; put pressure on developed countries on the 'polluter pays' principle, seeking deeper greenhouse gas emission cuts and a more effective Global Environment Facility; and it tasked the AU Commission to follow up with the African Ministerial Conference on the Environment (AMCEN), the United Nations Economic Commission for Africa (UNECA) and the African Development Bank (ADB).

Since 2007 African heads of state and government have made efforts to ensure as coherent a joint African position as possible at international climate negotiations, although this has come under strain at various times, given divergent national interests, the reality of relationships with key developed- or emerging-nation players and varying capacity and negotiating skills.<sup>27</sup>

Encouraged by the more active members in the various regions of Africa, the continent's institutions and RECs have also begun to give greater priority to shared information, analysis and response. This has been partly influenced by the logic of regional coordination of disaster risk management, knowing that climate change and hydro-meteorological hazards are transborder phenomena.<sup>28</sup> Cooperation in water management, and for regional infrastructure to cope with and adapt to climate threats, has been a feature. In some cases lesson-learning and making 'fundamental adjustments' to avoid disaster losses have moved forward, e.g. in 'relocating people and assets as in Mozambique', which experienced severe flooding twice in the first decade of this century.<sup>29</sup>

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<sup>23</sup> Mwiturubani and van Wyk, *Climate Change and Natural Resources Conflicts in Africa*, p. 17.

<sup>24</sup> Harry Verhoeven, 'Climate Change, Conflict and Development in Sudan: Global Neo-Malthusian Narratives and Local Power Struggles', *Development and Change* 42 (2011).

<sup>25</sup> Jo-Ansie Van Wyk, 'The African Union's Response to Climate Change and Climate Security', in Mwiturubani and van Wyk, *Climate Change and Natural Resources Conflicts in Africa*.

<sup>26</sup> African Union, 'Declaration on Climate Change and Development in Africa', Eighth Ordinary Session, 29–30 January 2007, <http://www.africa-union.org/root/UA/Conferences/2007/janvier/SUMMIT/Doc/Decisions/Decisions%20and%20Declarations%20-%208th%20Ordinary%20Session%20of%20the%20Assembly.doc>.

<sup>27</sup> John-Christophe Hoste, 'Where Was United Africa in the Climate Change Negotiations?', Egmont Institute, Africa Policy Brief, February 2010, <http://www.egmontinstitute.be/papers/10/afr/2010-feb-Afr.P.Brief-Hoste-climate-change.pdf>.

<sup>28</sup> Commission of the African Union, UN International Strategy for Disaster Reduction and the World Bank, 'Report on the Status of Disaster Risk Reduction in the Sub-Saharan Africa Region', January 2008.

<sup>29</sup> Tom Mitchell and Maarten van Aalst, 'Headlines from IPCC Special Report on Extreme Events', 18 November 2011,

The East African Community's climate change policy was developed following a regional heads of state directive in 2009.<sup>30</sup> The Economic Community of West African States (ECOWAS) policy for disaster risk reduction was adopted at a summit in 2007.<sup>31</sup> The Southern African Development Community (SADC) launched its Adaptation Strategy on Water at the Durban COP.<sup>32</sup>

A number of decisions and actions have been taken<sup>33</sup> since 2007 through the AU (including heads of state) and the AMCEN to establish joint positions in international negotiations and to set up institutions, including the Climate for Development in Africa programme (Climdev-Africa) to improve information<sup>34</sup> and the African Climate Policy Centre to support knowledge and capacity.

On one question the African states have had little difficulty in achieving consensus. Universal acceptance that Africa has contributed minimally to harmful greenhouse gases entering the world's atmosphere helped the African group stand together with other developing countries to ask the largest emitters to do most. At the 2007 AU summit President Yoweri Museveni of Uganda took a tough line, laying the blame squarely on the rich world.<sup>35</sup>

## Africa's diversity

As the IPCC says, the most effective adaptation and disaster risk reduction actions are those that offer development benefits in the relatively near term, as well as reductions in vulnerability over the longer term.<sup>36</sup> While very vulnerable to climate change, Africa is also a continent of great diversity and therefore exposed to variable impacts, depending on region and circumstance. The local context is important. As elsewhere in the world, country policy and performance have varied, with much depending on domestic political prioritization.

Some of the largest African countries receive climate change impacts that require both adaptation and mitigation responses. Nigeria is a notable example, with desertification issues in the north, sea-level rise threats and gas flaring in the south and forest cover issues in the southeast. Others have special resources or characteristics, e.g. hydrocarbons, tropical forests or a more industrialized economy. Nevertheless most sub-Saharan African countries have given priority to adaptation responses given the importance of rural areas and agriculture within their economies and the overriding priority of reducing widespread poverty.

Examples of mineral and natural resource assets (or potential assets) that can influence policy response can be found, for example, in South Africa (carbon emitter with heavy reliance on coal): Mozambique, the DRC and Ethiopia (hydro): and Angola, Libya, Nigeria and Algeria (hydrocarbons). Gabon, Cameroon, the Central African Republic and DRC have particularly important forests. Equatorial Guinea has both forests and oil. In both Western and Eastern Africa new discoveries of oil and gas, including offshore, present opportunities and challenges. Countries

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<http://www.climatecentre.org/downloads/File/IPCC/SREX%20-%20Print%20version%20of%20the%20longer%20document.pdf>

<sup>30</sup> East African Community Climate Change Policy, EAC Secretariat, 2011,

<http://www.uncsd2012.org/content/documents/468EAC%20CLIMATE%20CHANGE%20POLICY.PDF>.

<sup>31</sup> 'Sub-regional Dialogue of ECOWAS Countries on Climate Change in West Africa, 18–22 October 2008', <http://africaclimat-ancc.org/spip.php?article1>.

<sup>32</sup> Global Water Partnership, 'Climate change adaptation strategy for the SADC water sector launched',

<http://www.gwp.org/fr/gwp-in-action/Southern-Africa/News-and-Activities-GWP-Southern-Africa/Climate-change-adaptation-strategy-for-the-SADC-water-sector-launched/>.

<sup>33</sup> Economic Commission for Africa and the Organization for Economic Co-operation and Development, 'The Mutual Review of Development Effectiveness in Africa Report on Climate Change: Promise and Performance', joint report prepared for the Summit on the Millennium Development Goals, September 2010,

<http://repository.uneca.org/bitstream/handle/123456789/16488/Bib-11294.pdf?sequence=1>.

<sup>34</sup> 'such emerging initiatives [...] are poised to reinvigorate support for seasonal forecast information for agriculture', James Hansen, Simon Mason, Liqiang Sun and Arame Tall, 'Review of Seasonal climate Forecasting for Agriculture in Sub-Saharan Africa', *Experimental Agriculture*, Vol. 47, No. 2 (2011).

<sup>35</sup> Cited in *The Economist*, 'Drying up and flooding out', 12 May 2007.

<sup>36</sup> 'Managing the Risks of Extreme Events and Disasters to Advance Climate

Change Adaptation', A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change, IPCC Special Report (Cambridge University Press, 2012), [http://www.ipcc-wg2.gov/SREX/images/uploads/SREX-All\\_FINAL.pdf](http://www.ipcc-wg2.gov/SREX/images/uploads/SREX-All_FINAL.pdf).



in the Sahel and the Horn of Africa have a particular need to be drought-resilient. Botswana has taken a lead in calling for transparency of reporting on 'natural capital', which has a potential crossover impact on the quality of policy-making in mineral-rich African countries.

Dependence on river and lake systems for water, power and communications has a bearing on policy. Agriculture accounts for over 10% of global greenhouse gases. Land-use planning and 'smarter' farming practices are important to protect soil and water, and reduce livestock methane waste gas. Marine fisheries supply an important source of protein, and most major African ocean and coastal fisheries are under pressure: climate change adds an additional threat for the countries concerned.

### **Box 2: African actions and policies**

In the last decade some reformist African countries, regions and cities have acknowledged the nexus between poverty and climate change, and begun to focus on developing a range of appropriate responses. These include international and domestic climate change policies (investing domestically where it is judged logical to take opportunities and reduce risk), preparation for and management of disaster risks, low-carbon climate-resilient strategies, combined with mitigation and adaptation actions and projects.

**South Africa's** Foreign Minister Maite Nkoana-Mashabane was active in bringing about a positive outcome in Durban. South Africa, the most industrialized African country, is not typical of sub-Saharan African developing countries, however, and is a member both of the African group and of the BASIC group of emerging economies.<sup>37</sup> As such it has been able to use its influence in both directions when desirable, e.g. to help break down stand-offs between negotiating blocs that have at times hampered negotiations. Domestically it has presented a National Climate Change Response strategy espousing both mitigation and adaptation measures designed to enhance social, economic and environmental resilience, and emergency response capacity.<sup>38</sup> South Africa acknowledges that successful climate change mitigation requires emission targets (reduce by 34% by 2020 and 42% by 2025, absolute decline from 2035) while addressing the problem of cheap carbon-intensive electricity powered by coal, including through more emphasis on renewables.

Both on a country basis and while speaking for the New Partnership for Africa's Development (NEPAD), **Ethiopia's** late Prime Minister Meles Zenawi played a prominent part in climate change issues for some years, including climate finance. Aiming for rapid modernization towards middle-income status, Ethiopia launched a Climate-Resilient Green Economy (CRGE) strategy in 2011; its objectives are to keep greenhouse gas emissions in 2030 to current levels; to prioritize improved crops and livestock practices; to protect and re-establish forests; to expand electricity generation from renewable sources, mainly hydro (also for regional export); and to leapfrogging to modern and energy efficient technologies in transport, construction and industry. There is an emphasis on exploiting river resources for regional as well as local electricity demand, which has some impacts on traditional communities.

**Rwanda** similarly launched a Green Growth and Climate Resilience strategy in Durban, linked to its wish to promote tourism and bio-diversity.<sup>39</sup> This included geo-thermal power generation, soil fertility management, better design of cities for pedestrians and cyclists, irrigation infrastructure and roads.

**Gabon**, 88% of whose land is forest, explained its Green Gabon plan in Durban, saying that climate change considerations would be integrated into all sectors of activity, that new protected areas and reduced deforestation/degradation had avoided 450 million tonnes of CO<sub>2</sub> emissions in a

<sup>37</sup> Other members are Brazil, India and China.

<sup>38</sup> South African National Climate Change Response Portal, [www.climateresponse.co.za](http://www.climateresponse.co.za).

<sup>39</sup> Green Growth and Climate Resilience, National Strategy for Climate Change and Low Carbon Development, Kigali 2011, <http://www.uncsd2012.org/content/documents/364Rwanda-Green-Growth-Strategy-FINAL.pdf>.

decade, and committing to generating 80% of energy from renewable sources (mainly hydro), a national land-use plan and a 60% reduction of gas flaring by 2015.<sup>40</sup>

**The Democratic Republic of Congo**, which chairs the ten-member Central Africa Forest Commission,<sup>41</sup> has also emphasized the importance of forests, their conservation, management and funding by REDD+ within their national development strategy.<sup>42</sup> DRC delegate Tosi Mpanu Mpanu chaired the African group at Durban.

UNEP estimates that erratic weather patterns characterized by drought and flood cycles have become more frequent in **Kenya**, resulting in economic losses costing up to 40% of GDP.<sup>43</sup> Kenya's 2010 National Climate Change Response Strategy identified adaptation and mitigation measures designed to lead to climate-compatible development over the next 20 years, plus the mainstreaming of climate change aspects into national plans, making policy and law coherent and building capacity. Developing renewable energy with private-sector support is a national priority,<sup>44</sup> including feed-in tariff policy, focus on geothermal (e.g. potential Menengai 400MW plant<sup>45</sup>), solar and wind (e.g. project near Lake Turkana to produce 300MW).

Prior to the 2009 Copenhagen Conference, **Nigeria**, Africa's most populous country, paid particular attention to the implications for its hydrocarbons industry, on the lines of many other OPEC countries for which the main issue was the impact of response measures by developed countries on their oil and gas exports.<sup>46</sup> Mitigation action largely focused on increasing the role of gas and some (subsequently amended) gas flaring-out deadlines. Although oil and gas continued to 'dictate the pace and structure of growth of the Nigerian economy',<sup>47</sup> policy had evolved by 2009 to accommodate the reality of multiple anticipated impacts. In Durban Nigeria warned of climate change causing health and agriculture challenges, social unrest and distortions in sustainable livelihoods, and of 'increasing occurrences of flood, erosion and desert encroachment on alarming and unimaginable scales'.<sup>48</sup> It has produced policy frameworks such as a Climate Change Commission Bill and adaptation plans. A new REDD+ programme has been agreed. In Rio Finance Minister Ngozi Okonjo-Iweala made an important 'green growth' speech.

With increasing population, land use and agriculture (expanding irrigated areas), and economic activity linked to the deltaic coast and the Nile (with uncertainties over its flow), **Egypt** is vulnerable to any adverse impacts on water availability and coastal zones, including rising sea levels.<sup>49</sup>

**Mozambique** issued its green growth roadmap in Rio. It identifies climatic shocks – droughts, floods and storms – and seasonal variability as among its major challenges. Sectors most vulnerable to climate impact are identified as agriculture, energy, transport infrastructure, notably roads, and coastal areas. An updated National Communication is being prepared.<sup>50</sup>

<sup>40</sup> Statement by President Ali Bongo Ondima, Durban, December 2012.

<sup>41</sup> The Central Africa Forest Commission (which is complemented by the Congo Basin Forest Partnership and the Congo Basin Forest Fund funded by the United Kingdom and Norway) comprises Burundi, Cameroon, the Central African Republic, Chad, Congo, the DRC, Equatorial Guinea, Gabon, Rwanda and Sao Tomé e Príncipe.

<sup>42</sup> UN collaborative programme on Reducing Emissions from Deforestation and Forest Degradation in developing countries, [www.un-redd.org](http://www.un-redd.org).

<sup>43</sup> United Nations Environment Programme, Kenya Country Programme, [http://www.unep.org/roa/Programmes/KenyaCountryProgramme/KCP\\_Climate\\_Change/tabid/52011/Default.aspx](http://www.unep.org/roa/Programmes/KenyaCountryProgramme/KCP_Climate_Change/tabid/52011/Default.aspx).

<sup>44</sup> Scaling Up Renewable Energy Programme Investment Plan for Kenya, July 2011, [http://www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/Kenya%20IP\\_0.pdf](http://www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/Kenya%20IP_0.pdf).

<sup>45</sup> African Development Bank, Scaling up of Renewable Energy Project, 30 September 2011, <http://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/climate-investment-funds-cif/strategic-climate-fund/scaling-up-renewable-energy-program-in-low-income-countries-srep/>.

<sup>46</sup> Jacqueline Karas and Tatiana Bosteels, 'OPEC and Climate Change: Challenges and Opportunities', Energy, Environment and Development Programme Report, Chatham House, November 2005.

<sup>47</sup> Nigeria Vision 20:2020, May 2010, [www.npc.gov.ng](http://www.npc.gov.ng).

<sup>48</sup> Statement at Durban by Hadiza Ibrahim Mailafia, Environment Minister, 7 December 2011, [http://unfccc.int/files/meetings/durban\\_nov\\_2011/statements/application/pdf/111207\\_cop17\\_hls\\_nigeria.pdf](http://unfccc.int/files/meetings/durban_nov_2011/statements/application/pdf/111207_cop17_hls_nigeria.pdf) See also Nigeria Climate Action Network, <http://nigeriacan.org/web/>

<sup>49</sup> Shardul Agrawala, Annett Moehner, Mohamed El Raey, Declan Conway, Maarten van Aalst, Marca Hagenstad and Joel Smith, 'Development and Climate Change in Egypt: Focus on Coastal Resources and the Nile', OECD (2004), <http://www.oecd.org/environment/climatechange/33330510.pdf>.

<sup>50</sup> Statement by Salvador Namburete, Minister of Energy, Durban, 7 December 2011.

A large part of **Tanzania's** GDP is associated with climate-change-sensitive activities, especially agriculture.<sup>51</sup> Potential threats exist to coastal zones, health, energy, infrastructure, water resources, agriculture and ecosystem services. It has identified a priority need for adaptation action.

**Cape Verde**, as a small island state, suffers from high fragility and vulnerability. Fishing resources and coral reefs are threatened with potentially harmful economic consequences, e.g. for tourism and agriculture, food security and nutrition.<sup>52</sup>

**Gambia's** Pa Ousman Jarju has been influential as Chair of the Least Developed Countries negotiating group.

## Leadership and integration of climate issues

Once world leaders, including political, civil society, faith and business leaders, have reliable analysis of the climate change risks, there are ways in which they can use their public role to lead and to catalyse action, e.g. by supplying information, providing incentives, increasing the flexibility of the economic system, supporting specialized climate and agricultural research, and designing infrastructure.<sup>53</sup>

Although climate change awareness in Africa is broadening, systemic or holistic policy approaches at country or regional level have evolved only slowly. This is not confined to Africa. As evident elsewhere, short-term perspectives can lead to the persistence of 'business as usual' instincts, particularly where there are hydrocarbon or minerals extractive industries, or other significant revenue-earning natural resources. Unfortunately the ongoing global financial crisis provides unhelpful excuses for short-termism, horse-trading and deferring action.

The 'Rio+20' UN Conference on Sustainable Development strongly emphasized the need to 'mainstream' sustainable development into policy at all levels.<sup>54</sup> This argument applies equally strongly to climate change, where there is a risk of the issue being 'siloes' inside the environment ministry, instead of being integrated into policy by heads of state and ministers of finance and planning. Crucially, some African leaders have been showing the way by improving their national decision-making on the issue.

### *Leadership at sub-national level*

Forward-looking **sub-national leadership** on climate change can encourage viable partnerships at local level with the private sector and others – including in renewables – while informing and catalysing wider national policy. A sub-national approach to solutions to impacts of climate change has evolved in certain African regions and cities, in parallel with similar developments elsewhere in the world. The UNDP is quoted as saying that '50% to 80% of adaptation and mitigation actions necessary to tackle climate change are or will be implemented at the subnational or local level of governance'.<sup>55</sup>

Examples include efforts made by Western Cape Province in South Africa, which judges itself particularly vulnerable to climate change, including in the fishing and agricultural sectors. A Green Cape initiative was announced in 2010 to advance a 'green economy'; a sustainable energy bill was prepared and a summit held shortly before the Durban meeting. Another prominent example has been Lagos State in Nigeria, which has held several climate change meetings and assesses

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<sup>51</sup> Global Climate Adaptation Partnership and partners, 'The Economics of Climate Change in the United Republic of Tanzania', January 2011, [www.economics-of-cc-in-tanzania.org/images/Final\\_report\\_launch\\_vs\\_3.pdf](http://www.economics-of-cc-in-tanzania.org/images/Final_report_launch_vs_3.pdf).

<sup>52</sup> Ministry of Environment and Agriculture Republic of Cape Verde, 'National Adaptation Programme of Action on Climate Change 2008–2012', December 2007, [unfccc.int/resource/docs/napa/cpv01.pdf](http://unfccc.int/resource/docs/napa/cpv01.pdf).

<sup>53</sup> See Collier et al., 'Climate Change and Africa' on the role of government.

<sup>54</sup> 'Future We Want: Outcome Document'

<sup>55</sup> The Climate Group, 'Subnational Governments at the Forefront of Climate Action', [http://www.un-ngls.org/IMG/pdf/NRG4SD\\_-\\_Subnat\\_Govts\\_at\\_Forefront\\_of\\_Climate\\_Action-2.pdf](http://www.un-ngls.org/IMG/pdf/NRG4SD_-_Subnat_Govts_at_Forefront_of_Climate_Action-2.pdf).

that many, if not all sectors, will be affected.<sup>56</sup> Adverse climate change impacts in Lagos, a global mega-city and principal West African commercial hub, have consequences for the wider sub-region.

#### *Civil society leadership: what influence?*

The influence of civil society on climate change awareness and policy in Africa is growing, with the emergence of educated middle classes and better-informed rural, farming and business communities as democratization has advanced. It has an important role to play, not least in ensuring that the rights of the poorest are not overlooked. Due weight needs to be given to community and smallholder land or forest rights and community participation in the debate over economic models for lower-carbon growth. The controversy over 'land grabs' has highlighted issues of equity and power. Logically local civil society should continue to expand its capacity to convey the real situation at community level, to disseminate ideas, and to catalyse more effective public dialogue and innovation.

Civil society influence should not be over-estimated, however, given that escaping poverty has probably remained the main challenge for most citizens in Africa. Nor has it traditionally been the first instinct of central governments to consult civil society on climate change issues before rolling out policy.

The starting point in terms of awareness and capacity in Africa was low. In recent decades, however, environmental and climate change understanding has been building steadily. Some respected figures have had a wide impact – for example, Wangari Maathai of Kenya, the first African woman Nobel Prize winner, who set up the tree-planting Green Belt Movement and campaigned for forests and against land grabs. Other leading figures have likewise tried to articulate what ordinary citizens experience. South Africa's Archbishop Desmond Tutu and former Irish President Mary Robinson made a point of linking their concerns expressed at the time of the Durban Conference to those of African farmers in different countries who 'explained how floods and drought, and the lack of regular seasons to sow and reap, were outside their normal experience'.<sup>57</sup>

Civil society representatives made their presence felt in the margins of COP 17, including South African trade unions (with a jobs agenda) as well as a range of sub-Saharan African activist groups. But there was some 'conflict and controversy' in addition to problems over accreditation and other issues.<sup>58</sup>

While it has been useful for some African civil society groups to attend UNFCCC meetings in recent years,<sup>59</sup> it can be argued that pre-prepared international negotiations are sometimes a distraction from the mobilization of campaigns on the ground on key concerns.

Going forward, the jury is out on what priority African civil society will give to climate change, how far African governments will listen to them and how far governments will be transparent on these issues.

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<sup>56</sup> Building Nigeria's Response to Climate Change Project, 'Towards a Lagos State Climate Change Adaptation Strategy', prepared for Commissioner of Environment of Lagos State, January 2012, p. 2: '[M]any if not all sectors of the state are likely to be adversely affected by climate change, including agriculture and food security, water resources, wetlands and freshwater ecosystems, coastal zones and marine ecosystems, land use, forestry and biodiversity, energy, transportation, industry and commerce, financial services, human settlements and health, and disaster management.'

<sup>57</sup> Desmond Tutu and Mary Robinson, 'Climate change is a matter of justice', *The Guardian*, 5 December 2011.

<sup>58</sup> Katherine Austin-Evelyn, 'Civil society at the UN CCC: African activism at COP 17', *Climate Justice Now*, 6 February 2012.

<sup>59</sup> For example, representatives from the Congo Basin were supported by the Accra Caucus of NGOs to attend UNFCCC discussions, [http://www.rainforestfoundationuk.org/files/Accra\\_Report\\_English.pdf](http://www.rainforestfoundationuk.org/files/Accra_Report_English.pdf).

*Faith leadership: 'Help us ... to become more responsible stewards'*<sup>60</sup>

That there is a moral imperative for faith communities to tackle the causes of global warming became a more vocal message in the run-up to the Copenhagen Conference. It was a feature in Durban and at earlier meetings in Nairobi and Lusaka.<sup>61</sup>

Awareness of the issue has been widening among African faith leaders and their followers. During a debate on climate change and faith at Usmanu Danfodiyo University in Sokoto in November 2009, some said climate change was a calamity mankind brought on itself and that nothing should be done about it. Nevertheless many others present said action was needed.<sup>62</sup>

Research in 2009 into attitudes towards climate change and understanding of the issues showed that many African citizens framed their view of the environment and their relationship with it through their faith. 'The secret is with Allah. Allah brings the rain. The one who causes the drought, who sends us the drought is Allah,' one Afari (rural Ethiopian) woman is quoted as saying, in 'a typical response from people of all faiths'.<sup>63</sup>

In February 2010 at an Interfaith Forum on Climate Change in Abuja, Nigeria, more than 60 faith leaders from 10 African countries committed themselves to raising awareness of environmental ethics in their religious activities and to dedicate at least one sermon a month to issues related to climate change and environmental degradation.<sup>64</sup>

*Business leadership*

The role of business leaders as agents for change and sustainability – helping ensure broad-based support and delivery – has been advocated for some years by the World Business Council for Sustainable Development and others.<sup>65</sup> Business innovation and investment could be drivers for reducing carbon emissions.

Some African business leaders understood the theoretical win-win outcome for companies and communities alike from carbon finance initiatives such as the Kyoto Protocol's Clean Development Mechanism (CDM).<sup>66</sup> However, Africa's share of CDM projects has historically been tiny – 2.42% of projects in the pipeline at February 2010.<sup>67</sup> By comparison, China accounted for 33% of 530 registered projects in 2009,<sup>68</sup> with India, Brazil and Mexico making up most of the rest. Reasons

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<sup>60</sup> Pastoral letter from Southern African Catholic Bishops Conference on the occasion of COP17, preceding a plea from Pope Benedict XVI to reach a responsible solution meeting the needs of the poorest communities and future generations, [www.americanprogress.org/issues/2011/11/pope\\_durban\\_climate.html](http://www.americanprogress.org/issues/2011/11/pope_durban_climate.html).

<sup>61</sup> Avril Ormsby, 'Faith leaders say moral duty to tackle climate change', Reuters, 29 October 2009, [uk.reuters.com/article/2009/10/29/uk-britain-religion-climate-idUKTRE59S3UI20091029](http://uk.reuters.com/article/2009/10/29/uk-britain-religion-climate-idUKTRE59S3UI20091029).

<sup>62</sup> Bob Dewar, FCO Blog, posted 25 November 2009, Archived at [http://webarchive.nationalarchives.gov.uk/20110107172308/blogs.fco.gov.uk/roller/dewar/entry/we\\_are\\_stewards\\_of\\_our](http://webarchive.nationalarchives.gov.uk/20110107172308/blogs.fco.gov.uk/roller/dewar/entry/we_are_stewards_of_our)

<sup>63</sup> British Council, 'Nigerian Religious Leaders Unite in London', 6 December 2010, [www.britishcouncil.org/new/press-office/press-releases/nigerian-religious-leaders-london/](http://www.britishcouncil.org/new/press-office/press-releases/nigerian-religious-leaders-london/).

<sup>64</sup> Abuja Declaration on Climate Change, February 2010. Four of the leaders, speaking for over 100 million Christians and Muslims in Nigeria, were the Sultan of Sokoto Amirul Mumineen, Shayk as-Sultan Muhammadu Sa'adu Abubakar; the President of the Pentecostal Fellowship of Nigeria, Pastor Ayodele Joseph Oritsejafor; the leader of the Qadriyyah Sufi Movement in West Africa, Khalifa Sheikh Qaribullah Nasir Kabara; and the Roman Catholic Archbishop of Abuja, John Olorunfemi Onaiyekan.

<sup>65</sup> Peter Bakker, President of the World Business Council for Sustainable Development, 'The President's Blog' Blog, 27 January 2012, [president.wbcsd.org/2012/01/its-time-to-scale-up-sustainable-solutions.html#more](http://president.wbcsd.org/2012/01/its-time-to-scale-up-sustainable-solutions.html#more)

<sup>66</sup> Standard Bank, 'In Africa, Climate Finance is Development Finance', 29 November 2011, [www.blog.standardbank.com/blog/2011/11/africa-climate-finance-development-finance](http://www.blog.standardbank.com/blog/2011/11/africa-climate-finance-development-finance). '[T]he CDM is good business. Companies that need to offset their carbon emissions get a business benefit from funding low carbon development in emerging economies. Communities in emerging economies who sell their carbon credits gain revenue that enables them to develop. Their development brings in additional revenue. So, the CDM triggers sustainable growth in emerging economies and gives the developed world time to retrofit for greener production.'

<sup>67</sup> Francis Yamba, 'Lessons from the CDM Experience', Energy Research Centre, University of Cape Town, March 2010, [www.odandbrown.co.uk/odbrown](http://www.odandbrown.co.uk/odbrown).

<sup>68</sup> World Bank Institute, 'Increasing Capacity to Generate Certified Emission Reduction (CER) Credits through Registering Projects for Kyoto Protocol's Clean Development Mechanism (CDM)', Results Story Profile, 19 July 2011, <http://wbi.worldbank.org/sske/case/sharing-china%E2%80%99s-global-carbon-exchange-experience-other-developing-countries>.



cited for the Chinese success include predictable streamlined procedures and local awareness and capacity.

However slowly, African CDM awareness and experience has grown.<sup>69</sup> Partly in a move to improve Africa's share of CDM projects, the Durban conference introduced more streamlined procedures, an interest-free loan scheme and a programme of capacity-building training, which started to be rolled out at the fourth African Carbon Forum held in Ethiopia in April 2012.

Unfortunately it seems that global carbon markets 'are collapsing', particularly the CDM itself, according to a high-level panel set up at Durban by the CDM executive chair and UNFCCC executive secretary.<sup>70</sup> This panel makes a range of recommendations for implementation by the December 2013 climate change conference, including a new fund and *de facto* reserve bank to stabilize the market. It reports that prices in the CDM market have declined by 70% in the past year; claims mitigation targets are so modest that they no longer create strong incentives for private international investment and local action in developing nations; and that governments, private investors and financial institutions are losing confidence in the CDM market. The CDM's difficulties are reportedly linked to a drop in demand for certified emission reductions (CERs or carbon credits) in Europe, *de facto* the main market hitherto,<sup>71</sup> because Europe's industrial activity has dropped (cutting pollution).<sup>72</sup>

The CDM has played a useful role in increasing the understanding that private-sector finance through markets can work for developing-country projects that reduce emissions. The future shape of carbon markets, global and national, can be expected to evolve and reform. The high-level panel puts emphasis on good regulation and standards.

Investments in viable green projects in Africa can also continue to be made through a number of other mechanisms. The Global Green Growth Forum, for example, endorses a range of public-private partnerships,<sup>73</sup> while a recent Bangkok roundtable threw up a wide list of ideas including loan guarantee mechanisms for renewables, pooled funds for green venture capitalists, more feed-in tariffs and underwriting of green investments.<sup>74</sup>

For African countries and institutions, a key issue in attracting private investment in such projects will remain the confidence they can instil in the predictability and integrity of policy and legal environments, as well as the project quality.

## Building a lower-carbon strategy

Global and regional environments are increasingly complex, with potential impacts on community and individual rights. The choice of development path is key, e.g. modernization based on green and climate-resilient growth policies as against shorter-term 'business as usual' perspectives.

To give an example, one challenge for African leaders is how best to take advantage of opportunities from 'resource windfalls' such as discoveries of oil, gas or minerals. Rather than

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<sup>69</sup> An example is a project involving installation of solar water-heaters in low-income households, showcased in the margins of the Durban COP. Other examples include CDM projects so far approved in Nigeria, such as recovery of associated gas that would otherwise be flared, efficient fuel wood stoves and solid waste composting.

<sup>70</sup> Recommendations of the High Level Panel on the CDM Policy Dialogue, 'Climate Change, Carbon Markets and the CDM: A Call to Action', September 2012, [www.cdmpolicydialogue.org](http://www.cdmpolicydialogue.org).

<sup>71</sup> The United States did not ratify Kyoto; emerging economies such as China and India carry no obligations under Kyoto; the EU's cap-and-trade emission scheme can top up by buying CDM credits, See also Fiona Harvey, 'Global carbon trading system has "essentially collapsed"', *The Guardian*, 10 September 2012, <http://www.guardian.co.uk/environment/2012/sep/10/global-carbon-trading-system>.

<sup>72</sup> 'Complete disaster in the making', *The Economist*, 15 September 2012.

<sup>73</sup> Members are China, Qatar, Denmark, Kenya, Mexico and South Korea. Global Green growth Forum, 'China Joins Alliance for Global Green Growth', 21 September 2012. This shows China as 'investing \$350b on energy efficiency measures over the next three and a half years', <http://www.globalgreengrowthforum.com/news/3gf-in-the-media/china-joins-alliance-for-global-green-growth/>.

<sup>74</sup> Dan Hamza-Goodacre, 'Small steps in Bangkok climate change talks', CDKN Blog, 7 September 2012, <http://cdkn.org/2012/09/small-steps-in-bangkok-climate-change-talks/>.

focusing merely on short-term resources and growth, there is an opportunity to look forward in the best long-term interests of the country and to plan in a way that removes or weakens the historical link between energy use and greenhouse gas emissions, with outcomes that minimize climate change (e.g. avoiding being locked into high-carbon infrastructure), while still meeting the energy needs of the poor. As well as exploiting the ‘windfalls’, leaders can combine a climate-resilient growth strategy aimed at economic development and shared prosperity with a long-term lower-carbon trajectory. With technology transfer and other inputs, these countries will have options to invest in renewable energy, in projects that reduce emissions and give clean energy, and in energy efficiency and conservation.

An important factor in energy planning and practical government decisions has been the growth in global availability of natural gas, including ‘unconventional’ shale gas, produced by hydraulic fracturing, so far mostly in North America. This is seen as generally less carbon-intensive than coal but also as having a larger environmental production footprint as well as more greenhouse gas emissions than conventional gas.<sup>75</sup>

A ‘golden age’ of gas has been predicted by some. Nevertheless, while gas use may offer a temporary solution to some countries, has helped by catalysing a switch from dirtier coal burning and thus bringing a temporary drop in US emissions,<sup>76</sup> and is seen by Qatar (the host of COP 18) as ‘an essential part of the global solution to climate change’,<sup>77</sup> it does contribute to carbon emissions, thus posing a long-term dilemma.

Although some may still argue the case for carbon-intensive fuels such as coal for power so that poor countries can develop, the dangers of carbon emissions mean the World Bank has guidelines that aim to restrict support to a minimum.<sup>78</sup> Moving from fossil fuels towards renewable energy remains a basic global task. And for African countries, choosing the most appropriate, well-rounded, mix of long-term energy policy options available for a low-carbon trajectory remains fundamental.

The World Bank, the ADB and other agencies are encouraging investment in renewables. This complements the efforts of a range of African governments and banks, including in South Africa, where Eskom<sup>79</sup> has reportedly started its first major renewables project (a 100MW wind farm) and where both China and India are looking to invest in renewables. UNEP reports that Cape Verde, Kenya, Madagascar, Sudan, Chad and Mauritania are among countries with significant potential. Its assessment is that opening up Africa’s renewables potential could improve energy security, create regional markets and help overcome current obstacles, e.g. the cost of electricity generation or grid access.<sup>80</sup>

In many cases the nature of African economic growth is becoming more complex. Some analysts point out that recent economic growth in many countries reflects not just natural resources and commodity prices but also structural changes and diversification, e.g. into retail, banking, telecommunications and manufacturing.<sup>81</sup> The impetus to modernize, industrialize and urbanize in most African countries affects both resilience and policy responses. The relative strength of the middle class and private sector in each country has proved important. The dramatic increase in access to mobile phones has helped spread information, knowledge, accountability and resilience. All initiatives for economic growth and modernization have the potential for carbon emissions and for impacts on the environment, either directly or in the supply chain – as shown, for example, in

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<sup>75</sup> International Energy Agency, *Golden Rules for a Golden Age of Gas*, Special Report, 2012.

<sup>76</sup> Keith Kloor, ‘Will fracking help or hinder the fight against climate change?’, *Discover*, 29 August 2012.

<sup>77</sup> 2nd IEF–IGU Ministerial Gas Forum, Doha, 30 November 2010, <http://www.igu.org/ministerial-gas-forums/2nd-min-gas-forum-20-nov-doha/2nd-ief-igu-ministerial-gas-forum/?searchterm=ief> 2010.

<sup>78</sup> World Bank, ‘The Challenge of Low Carbon Development’, Independent Evaluation Group findings on coal power, 2011: ‘WBG support [is restricted to] instances where coal is the least cost after environmental externalities have been considered and there is optimal use of energy efficiency and where no concessional funds are available to finance low carbon alternatives’, <http://www.worldbank.org/ieg/climatechange/coal-power.html>.

<sup>79</sup> ‘It’s Not Easy being Green in South Africa – But the Rewards are Great’, Recharge, 25 September report, [www.rechargenews.com/business\\_area/finance/article280006.ece](http://www.rechargenews.com/business_area/finance/article280006.ece).

<sup>80</sup> UNEP, ‘Financing Renewable Energy in Developing Countries: Drivers and Barriers for Private Finance in sub-Saharan Africa’, 2012.

<sup>81</sup> ‘What’s Driving Africa’s Growth?’ *McKinsey & Company Quarterly*, June 2010.

the debate over air-freighting exports of fresh produce to Western markets, opposing more 'food miles'.<sup>82</sup>

The importance of forest cover for climate change and pressures on it from people who want to grow food make deforestation and forest degradation significant issues for Africa. They can be complex, hard to understand and difficult to build consensus around. Stakeholders sometimes confront each other from simplistic 'forest' or 'agriculture' perspectives.

The Congo Basin – the world's second largest rainforest and a carbon store acting as important 'lungs' for the world – is central to the efforts to avoid and reduce future emissions. The UN's REDD+ programme is one initiative with positive potential, addressing both mitigation and adaptation.<sup>83</sup> As with CDM, however, Africa has hitherto received only a small fraction of available finance (11% by 2010).

There is concern that the interests of forest communities need to be protected and a balance struck between them and 'land occupiers, governments and large commercial players'.<sup>84</sup>

Despite the complexities, in Durban seven Central African countries and their donor partners renewed their commitment to REDD+ implementation in the Congo Basin; essentially this was a pledge by donors to scale up support in return for countries abiding by best-practice policies.<sup>85</sup> Fourteen African countries also belong to the Forest Carbon Partnership Facility, which complements REDD+ by showing how it can be applied in countries and by learning lessons.<sup>86</sup>

Additional innovative ways are being explored to encourage private investment alongside public money to reduce deforestation in developing-country forest nations including in Africa.<sup>87</sup> Appropriate technology can also improve the livelihoods of the very poor who depend on wood or charcoal for fuel.

A range of private-sector agriculture initiatives in Africa is designed to be climate-compatible rather than adding to deforestation, as agricultural expansion is known to be 'one of the primary drivers of deforestation in tropical countries'.<sup>88</sup> Some argue that reducing pressure on forests, thus reducing forest loss, has to be accompanied by the intensification of agricultural production, and regret that agricultural policy seems marginal to ongoing REDD+ discussions.<sup>89</sup>

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<sup>82</sup> Olga Nartova, 'Carbon labelling: moral, economic and legal implications in a World Trade Environment', National Centre of Competence in Research Trade Regulation working paper 2009. [http://phase1.nccr-trade.org/images/stories/publications/IP6/Nartova\\_WTOCarbonLabeling.pdf](http://phase1.nccr-trade.org/images/stories/publications/IP6/Nartova_WTOCarbonLabeling.pdf)

<sup>83</sup> REDD+ stands for Reducing Emissions from Deforestation and Forest Degradation in developing countries plus conservation, sustainable forest management and enhancement of carbon stocks. See Convention on Biological Diversity, <http://www.cbd.int/forest/redd-plus/>.

<sup>84</sup> Cheikh Mbow et al., 'Challenges and Prospects for REDD+ in Africa', Global Land Project Report, 2012, [http://www.start.org/Publications/REDD\\_Report.pdf](http://www.start.org/Publications/REDD_Report.pdf).

<sup>85</sup> Signed by Burundi, Cameroon, the Central African Republic, Chad, the DRC, Republic of Congo and Rwanda, plus Australia, France, Canada, Germany, Norway, the United Kingdom, the United States and the EU. Central African countries assume the need to 'develop policies, strategies and programs for sustainable development (green economy) that include "low-carbon" development approaches for all key sectors including forests, agriculture, energy, mining and transportation', including 'REDD+ strategies that address the main drivers of deforestation and forest degradation', and to 'strengthen forest governance', including 'adherence to applicable international fiduciary, social and environmental standards' and 'pursue land use planning and zoning processes that are participatory and holistic.' See UN REDD Programme Blog, <http://unredd.wordpress.com/2011/12/07/un-redd-supports-cop17-joint-declaration-of-intent-for-redd-in-the-congo-basin/> 7 December 2011 in COP 17.

<sup>86</sup> The Forest Carbon Partnership Facility, [www.forestcarbonpartnership.org](http://www.forestcarbonpartnership.org).

<sup>87</sup> Andrew Gaines and John Grayson, 'The potential for risk mitigation mechanisms to facilitate private sector investment in REDD+ projects', *The Forest Investment Review*, July 2009, <http://www.forumforthefuture.org/sites/default/files/project/downloads/forestinvestmentreviewfull.pdf>

<sup>88</sup> The Prince's Rainforests Project, 'REDD+ and Agriculture: Proposed Solutions from the Private Sector', 18 November 2010. <http://www.rainforestsos.org/private-sector-proposed-solutions-to-reduce-agricultural-expansion-into-forests/>.

<sup>89</sup> Henry, Matieu et al., 'Implementation of Redd+ in Sub Saharan Africa', *Environment and Development Economics*, Vol. 16 (2011).

There has also been growing concern about 'land grab' investments where foreign governments or companies have signed deals with African governments or elites that override the rights of communities or smallholders.<sup>90</sup>

While bio-fuels are seen in some cases as helpful (since they release less carbon than fossil fuels) climatic benefits depend on specific circumstances, and there can be impacts on bio-diversity, ecosystems and water availability.<sup>91</sup>

Equally a number of non-governmental actors are using innovative instruments to help African farmers tackle climate risk, e.g. 'micro-insurance' to insure farmers against crop loss if rainfall fails.<sup>92</sup>

## Africa in key negotiations

### *Durban*

Following the disappointing 2009 Copenhagen Conference (on which UN Secretary-General Ban Ki-moon commented dryly that 'it will take more than this to definitively tackle climate change'<sup>93</sup>), there were many challenges facing the international community. These included the need to build bridges and trust between developed and developing countries as climate negotiations were taken forward in Cancún (2010) and then Durban. Although there was some progress in Cancún, including agreement to establish a Green Climate Fund, the pre-Durban omens for an ambitious outcome were not propitious,<sup>94</sup> given the world economic downturn and resulting unhelpful international political context. World leaders had short-term economic issues to worry about, such as the threat of a global recession and the implications of the euro crisis. Carbon prices in the European Emissions Trading Scheme (ETS) were low.

Most African countries, including members of the Association of Small Island States (AOSIS) and Least Developed Countries (LDC) groups, support a target of stabilizing global temperature rise below 1.5°C.<sup>95</sup> The joint African position before the 2011 Durban meeting was encapsulated at the prior AMCEN meeting in Bamako.<sup>96</sup> Its main points included:

- that the UNFCCC and its Kyoto Protocol still constituted the fundamental global framework on climate change and required full and effective implementation;
- that Durban should result in full, sustained implementation of the convention, and a second commitment period for Annex 1 parties under the Kyoto Protocol;
- a complaint about the Green Climate Fund's complexity and urging that it should consider Africa's need for easier, 'fast-track' finance through national mechanisms as well as the ADB.

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<sup>90</sup> 'UN adopts historic "land grab" guidelines', BBC News, 11 May 2012, <http://www.bbc.co.uk/news/world-18039528>.

<sup>91</sup> Clement Chipokolo, 'Renewable Energy in sub Saharan Africa', *Joto Afrika*, No. 8, October 2011. <http://www.alin.or.ke/i/Issue%20008%20-%20Should%20Africa%20take%20the%20renewable%20energy%20path?>

<sup>92</sup> See the Horn of Africa Risk Transfer for Adaptation (HARITA) programme for crop insurance (Oxfam America and World Food Programme), [www.oxfamamerica.org/publications/harita](http://www.oxfamamerica.org/publications/harita).

<sup>93</sup> Ban Ki-moon, 'Opening remarks at media encounter at UN Climate Change Conference', 19 December 2009, [http://www.un.org/apps/news/infocus/sgspeeches/statments\\_full.asp?statID=685](http://www.un.org/apps/news/infocus/sgspeeches/statments_full.asp?statID=685).

<sup>94</sup> Simon Maxwell, 'Reflections on the Durban Outcome', 8 January 2012. [www.simonmaxwell.eu/blog/reflections-on-the-durban-outcome.html](http://www.simonmaxwell.eu/blog/reflections-on-the-durban-outcome.html).

<sup>95</sup> See the '350.org' website stating that 112 countries have called for reducing CO<sub>2</sub> emissions below 350 parts per million and for stabilizing global temperature rise below 1.5°C, <http://www.350.org/en/node/13753>.

<sup>96</sup> 'AMCEN Special Session Endorses African Common Climate Position', IISD Press Release, 19 September 2011, [africasd.iisd.org/news/amcen-special-session-endorses-african-common-climate-position/](http://africasd.iisd.org/news/amcen-special-session-endorses-african-common-climate-position/).

The Durban joint statement on 9 December 2011, brokered by the EU and the LDC group led by the Gambia, together with the AOSIS group, was a significant moment in the conference.<sup>97</sup> It symbolized and embodied determination by some key developed and developing countries to work together more inclusively for the long-term future.

The statement called for an ambitious outcome in Durban and more action for a robust mandate and roadmap for a legally binding instrument. It embodied the approach by key African delegations that sought as positive an outcome to Durban as possible in the circumstances. This led to further negotiations. The eventual compromise was duly adopted, including crucially by the United States, China and India.

The outcome of the Conference, the 'Durban platform', included 'operationalization of key outcomes from Cancún, answers on the future of the Kyoto Protocol, and establishment of a path for developing a new universal legally-binding treaty'.<sup>98</sup>

There was agreement to:

- launch a process starting in 2012 involving all parties (not just Annex 1) towards a new legal framework by 2015, for implementation from 2020, and a new Ad Hoc Working Group on the Durban Platform for Enhanced Action to begin work immediately;
- start a second commitment period of the Kyoto Protocol on 1 January 2013, ending at the end of 2017 or 2020 (aimed to ensure that aggregate greenhouse gas emissions of Annex I parties are reduced by at least 25–40% below 1990 levels by 2020);
- operationalize the Technology Mechanism in 2012;
- approve the Green Climate Fund<sup>99</sup> (but agreement on how to fund it remained undecided), launch the Adaptation Committee and adopt procedures to allow carbon capture and storage projects (and improve access for poorer countries) under the CDM;
- establish a work programme to look at sources of long-term finance for developing countries, with the aim of mobilizing at least \$100 billion per year by 2020;
- develop a new market-based mechanism to help developed countries achieve a portion of their commitments or targets under the convention; and
- keep REDD+ on the table to be developed (e.g. following debate over whether the private sector should be included as a source of finance).

There was wide satisfaction and relief at the outcome. That it was a compromise that did not meet all the hopes of Africa was clear.<sup>100</sup> But the Durban platform ensured momentum was maintained and, partly thanks to key African delegations and the EU, reflected 'the growing and in some quarters unexpected determination of countries to act collectively'.<sup>101</sup> It reasserted the principle that climate change should be tackled through a unified system with some form of legal commitments for all countries. Among other things, it side-stepped arguments of historical 'differentiation', and

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<sup>97</sup> Common statement by the Least Developed Countries, the Alliance of Small Island States and the European Union, 9 December 2011.

<sup>98</sup> 'The Durban Platform', <http://www.un.org/wcm/content/site/climatechange/pages/gateway/the-negotiations/durban>.

<sup>99</sup> See updates by Smita Nakhoda of the Overseas Development Institute and Liane Schalatek and Alice Caravani of the Heinrich Böll Stiftung on climate finance following the first meeting of the board of the Green Climate Fund, <http://www.climatefundupdate.org/news>.

<sup>100</sup> Tosi Mpanu Mpanu, spokesman for the Africa group, said: 'It's a middle ground, we meet mid-way. Of course we are not completely happy about the outcome, it lacks balance, but we believe it is starting to go into the right direction.' 'Reaction to UN Climate Deal', BBC News, 11 December 2011, <http://www.bbc.co.uk/news/mobile/science-environment-16129762>.

<sup>101</sup> Achim Steiner, UNEP news centre report, Durban, 11 December 2011, <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=2661&ArticleID=8984&l=en>.



implied that efforts by China and India in recent years to expand their economies rapidly to escape poverty had brought new responsibilities for them as large emitters.<sup>102</sup>

As the UNEP Executive Director, Achim Steiner, put it,

the outcomes of Durban provide a welcome boost for global climate action [...] This provides a clear signal and predictability to economic planners, businesses and investors about the future of low-carbon economies. A number of specific commitments agreed in Durban also indicate that previous decision on financing, technology and REDD+ are moving to implementation.<sup>103</sup>

Others were disappointed with the delay of another eight years while concentrations of greenhouse gases rise and high-carbon infrastructure continues, without mitigation commitments being strengthened to the extent recommended by scientists.

### *Following up Durban*

Africa took an early opportunity to set out its stall on the green economy agenda at the World Economic Forum held in Addis Ababa in May 2012 (see below),<sup>104</sup> ahead of the UN Conference on Sustainable Development in Rio in June.

While the UNFCCC is a separate process from that of Rio, there is a natural crossover of objectives. The outcome document of the Rio+20 summit<sup>105</sup> described it as an opportunity to renew the commitment to sustainable development and to address themes of a green economy – both important for climate change.

In the run-up to the COP 18 conference in Doha, several work programmes were under way, together with the establishment of the new UNFCCC bodies announced at Durban. After 'tense' inter-sessional talks in Bonn, 'small steps' were reportedly made at further talks in Bangkok.<sup>106</sup> Qatar will need to show strong leadership as the summit host.

At the Rio+20 conference, the breadth of interests and issues contained in the concept of 'sustainable development' made it an over-complex forum for the emergence of ambitious outcomes. Instead the language in the final document on most issues was gradualist and non-prescriptive.

ADB President Donald Kaberuka, while saluting the overall process and improved awareness of poverty and environment issues, described Rio's outcome as aspirational – a glass half full, half empty.<sup>107</sup> Some African and other participants were disappointed by the failure to secure ambitious outcomes.<sup>108</sup> The Africa Progress Panel was hard-hitting about 'lack of commitment to defined and measurable sustainable development goals'.<sup>109</sup> The summit responded cautiously to the hopes of African countries, supported by others including the EU, to transform UNEP into a full UN Environment Organization.<sup>110</sup> There was also suspicion in some quarters that 'green economy' targets might be camouflage for global capitalism or restrictive trade practice,<sup>111</sup> although the ADB

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<sup>102</sup> See Andrew Hurrell and Sandeep Sengupta, 'Emerging Powers, North–South Relations and Global Climate Politics', and Jennifer Clapp and Eric Helleiner, 'International Political Economy and the Environment: Back to the Basics?', *International Affairs*, Vol. 88, No. 3 (2012).

<sup>103</sup> Steiner, UNEP news centre report, 11 December 2011.

<sup>104</sup> World Economic Forum, 'Africa's Green Agenda', proceedings, 10 May 2012.

<sup>105</sup> See 'Future We Want: Outcome Document', para 12.

<sup>106</sup> Hamza-Goodacre, 'Small steps in Bangkok climate change talks'.

<sup>107</sup> Donald Kaberuka, press conference, Rio de Janeiro, 21 June 2012.

<sup>108</sup> Kingsley Ighobor, 'Rio Summit Keeps African Hopes Alive', *Africa Renewal*, August 2012, <http://www.un.org/africarenewal/magazine/august-2012/rio-summit-keeps-african-hopes-alive>.

<sup>109</sup> Kofi Annan, 'Africa Progress Panel criticises Failure of Rio +20 to Deliver for Africa', press release, 25 June 2012, <http://www.africaprogresspanel.org/en/areas-for-action/climate-change/events-and-workshops/rio-20-and-africa/>.

<sup>110</sup> President Mwai Kibaki, Speech, 20 June 2012, [www.statehousekenya.go.ke/speeches/kibaki/june2012/2012200601](http://www.statehousekenya.go.ke/speeches/kibaki/june2012/2012200601).

<sup>111</sup> See RTCC, 'Rio+20: 2012 summit just one step on long walk to a greener future', [www.rtcc.org/policy/rio20](http://www.rtcc.org/policy/rio20).

made it clear that the green economy was good for Africa and the summit acknowledged that fossil fuel subsidies should be 'rationalized'.<sup>112</sup>

In general the G77+China group was assertive, while Brazil as hosts and the other BASIC members were active. The subsequent BASIC meeting in Johannesburg in July 2012 emphasized Rio's reaffirmation of the principle of 'common but differentiated responsibilities', perhaps signalling that Rio was seen as an opportunity to 'push back' against developed countries on resources issues following the Durban outcome.<sup>113</sup>

Sentiments of good intentions were the norm. However, in addition to multiple references to concern across the development agenda – on biodiversity, sea-level rise, deforestation, desertification, food security, water and sanitation, health and population, energy, disaster mitigation, pollution, health of the oceans, fisheries and other issues – the Rio conference did acknowledge that climate change was a 'cross-cutting and persistent crisis' that undermined the 'ability of all countries, in particular developing countries, to achieve sustainable development and the Millennium Development Goals (MDGs) [...] Combating climate change requires urgent and ambitious action in accordance with the principles and provisions of the UNFCCC.'<sup>114</sup>

The final document promised to build on progress made in Durban, and called for prompt operationalization of the Green Climate Fund, and for parties to UNFCCC and Kyoto to fully implement their commitments.<sup>115</sup>

As world leaders were not obliged to negotiate over what had become a locked-down text, much energy went into events outside the hall. Some important statements were made, such as that by Nigeria's finance minister, Ngozi Okonjo-Iweala, who argued that there were ways to grow strongly and grow green ('I don't think it's either or'), saying subsidies were unsustainable and highlighting potential for green growth in the power sector and agriculture.<sup>116</sup> Other countries such as Mozambique laid out their green economy plans.<sup>117</sup> A natural capital summit was held, building on the Gaborone Declaration and putting the spotlight on the value of the contribution of natural assets to the economy.<sup>118</sup> Multilateral agencies including the World Bank<sup>119</sup> and ADB<sup>120</sup> made important 'green growth' statements. And there can be some optimism that international business leaders are increasingly integrating climate change and sustainable development into their business models, and seeking collaboration with governments on 'sustainability solutions'.<sup>121</sup>

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<sup>112</sup> 'Future We Want: Outcome Document', para 225.

<sup>113</sup> Joint statement of 11th BASIC ministerial meeting on climate change, Johannesburg, 12–13 July 2012.

<sup>114</sup> See 'Future We Want: Outcome Document', para 25.

<sup>115</sup> *Ibid.*, paras 17, 25, 190–92.

<sup>116</sup> Ngozi Okonjo-Iweala, speech by on green growth discussion, Rio de Janeiro, 20 June 2012.

<sup>117</sup> See Rio Conventions Pavilion, [www.riopavilion.org](http://www.riopavilion.org).

<sup>118</sup> The natural capital summit was a UK-led side event, co-hosted by UK Deputy Prime Minister Nick Clegg, in association with the World Bank and Natural Capital, <http://www.uncsd2012.org/index.php?page=view&type=1000&nr=450&menu=126>. See also Gaborone Declaration on natural capital in national accounting, [http://www.conservation.org/conferences/africa\\_sustainability\\_summit/Documents/Gaborone-Declaration-HoS-endorsed\\_5-30-2012\\_Govt-of-Botswana\\_CI\\_Summit-for-Sustainability-in-Africa.pdf](http://www.conservation.org/conferences/africa_sustainability_summit/Documents/Gaborone-Declaration-HoS-endorsed_5-30-2012_Govt-of-Botswana_CI_Summit-for-Sustainability-in-Africa.pdf).

<sup>119</sup> See Rachel Kyte, Vice President, Sustainable Development, World Bank, 'High Stakes at Rio: The World Bank's Key Issues for Rio +20', World Bank press release, 21 May 2012, [http://web.worldbank.org/external/default/main?contentMDK=23200243&queryeventPage=64886534&queryFOLDID=6528191&querySiteMDK=22106457,20004168&querySitePK=5929282&pagePK=7278667&queryPagePK=6532418&theSitePK=5929282&piPK=64911824&queryCONTTYPE=20085704,64254381,64254393&queryContType=IT\\_Overview\\_SDN&querymaxRows=1&querySPAXR=External&querySelectColumns=TITLE,LNCHDT&queryHeading=Feature%20Stories&menuPK=64885113&queryStatus=Live&queryGif=btn\\_Feature\\_Stories.gif&queryFolderMDK=20009166,64254200,22207139](http://web.worldbank.org/external/default/main?contentMDK=23200243&queryeventPage=64886534&queryFOLDID=6528191&querySiteMDK=22106457,20004168&querySitePK=5929282&pagePK=7278667&queryPagePK=6532418&theSitePK=5929282&piPK=64911824&queryCONTTYPE=20085704,64254381,64254393&queryContType=IT_Overview_SDN&querymaxRows=1&querySPAXR=External&querySelectColumns=TITLE,LNCHDT&queryHeading=Feature%20Stories&menuPK=64885113&queryStatus=Live&queryGif=btn_Feature_Stories.gif&queryFolderMDK=20009166,64254200,22207139).

'We're seeing the nexus of food crises, water insecurity, and energy needs, all made much more complicated by climate change. Countries and communities need to build resilience and grow more efficiently. Green growth is at the heart of that. It is the path to sustainable development.'

<sup>120</sup> Donald Kaberuka, Remarks at the high-level roundtable, Rio de Janeiro, 20 June 2012: 'We will focus on sustainable energy solutions and infrastructure, food security, building resilience, national inclusive green growth and climate adaptation plans as well as valuation of natural capital'.

<sup>121</sup> Business solutions for a sustainable world, Rio, 19 June 2012, [www.wbcsd.org](http://www.wbcsd.org).

### Box 3: What was agreed at Rio?

Rio outcomes include:

- a process to create Sustainable Development Goals, coherent with UN development agenda post-2015 and not diverting effort from the MDGs, and a 30-member open working group to take this forward;<sup>122</sup>
- creation of an intergovernmental high-level political forum to follow up on implementation of sustainable development;
- agreement to 'strengthen' the role of UNEP; and
- cautious encouragement of 'green economy'.<sup>123</sup>

### What does all this mean for Africa?

It still remains to be seen how Durban's outcome will translate into actual global emissions reductions, and by when – and the full impact on Africa.

One question is whether the eight-year delay will add to the inevitability of global average warming above the magic target of 2°C. The likely answer is 'yes'. According to UNEP, the key question is whether the outcome 'will match the science and lead to a peaking of global emissions before 2020 to maintain the world on a path to keep a temperature increase below 2° Celsius'.<sup>124</sup> Many believe the 'modest but significant steps' [agreed in Cancún and Durban] are not enough to prevent a 2°C rise being exceeded within decades.

Some analysis is more specific, pointing to a 50% chance of global temperatures rising by 3–4°C, and also stating that 'fragile areas such as Southern Africa could experience 50 per cent more warming than the global rate'.<sup>125</sup> As one expert said,

If the actions pledged in Cancún are not strengthened, annual emissions will probably level off and stay at about 50 billion tonnes per year, which would put the world on the path towards likely global warming of at least three centigrade degrees, to a global temperature not seen on Earth for more than three million years.<sup>126</sup>

UNEP further says that 'by some estimates the current emissions trajectories, unless urgently reversed, could lead to a global temperature rise of 3.5°C or more sometime by the end of the century'.<sup>127</sup> The language in Rio was likewise gloomy.<sup>128</sup>

Given these sobering judgments it is instructive to be reminded of the Hadley Centre's '4°C map' (See Figure 3 below), produced prior to Copenhagen.

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<sup>122</sup> UN Secretary-General Ban Ki-moon said this group's work would be closely coordinated with that of the High Level Panel to advise on the global development agenda post-2015, whose three co-chairs are UK Prime Minister David Cameron, Liberian President Ellen Johnson-Sirleaf and Indonesian President Susilo Bambang Yudhoyono, 31 July 2012.

<sup>123</sup> Future We Want: Outcome Document' para 56: 'we consider green economy in the context of sustainable development and poverty eradication as one of the important tools available for achieving sustainable development and that it could provide options for policymaking but should not be a rigid set of rules'.

<sup>124</sup> Steiner, UNEP news centre report, 11 December 2011.

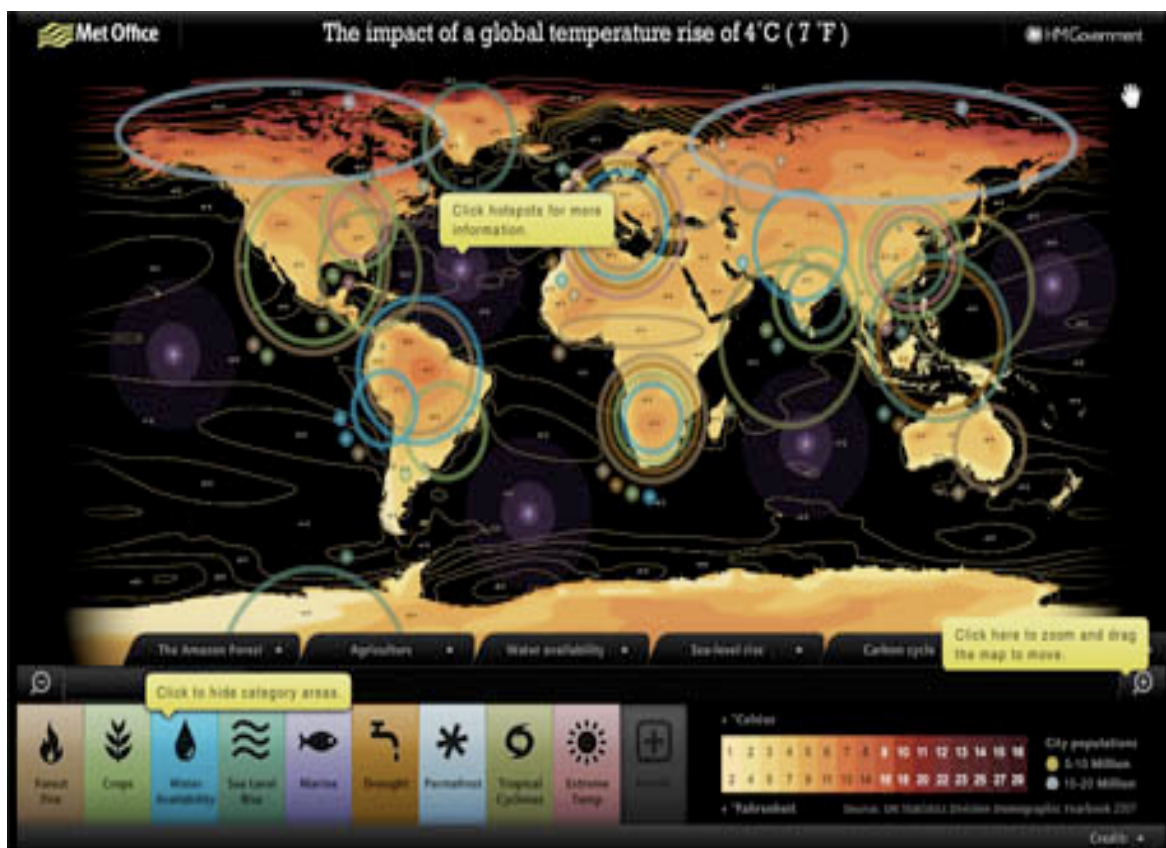
<sup>125</sup> 'Degrees of Risk: Defining a Risk Management Framework for Climate Security', E3G, February 2011.

<sup>126</sup> Lord Nicholas Stern, quoted in a media release of the Grantham Research Institute of Climate Change and the Environment and the Centre for Climate Change Economics and Policy at LSE, 11 December 2011, [http://www2.lse.ac.uk/GranthamInstitute/Media/Releases/2011/MR111211\\_climate-change-summit-durban.aspx](http://www2.lse.ac.uk/GranthamInstitute/Media/Releases/2011/MR111211_climate-change-summit-durban.aspx).

<sup>127</sup> UNEP News Centre 11 December 2011, Durban, <http://www.unep.org/newscentre/Default.aspx?DocumentID=2661&ArticleID=8984&I=en>.

<sup>128</sup> 'Future We Want: Outcome Document', para 191: 'We note with grave concern the significant gap between the aggregate effect of mitigation pledges by parties in terms of global annual emissions of greenhouse gases by 2020 and aggregate emission pathways consistent with having a likely chance of holding the increase in global average temperature below 2°C, or 1.5°C above pre-industrial levels'.

**Figure 3: Meteorological Office Hadley Centre map on ‘The impact of a global temperature rise of 4°C’**



Source: Met Office Hadley Centre 2011

Note: the figure of 2°C increase (above pre-industrial levels) was the target set by many as the upper ceiling for avoiding dangerous climate change. At the time this was the subject of much debate: the IPCC stated in 2007 that even 2°C was likely to have serious impacts.<sup>129</sup>

### Africa needs implementation of Durban, whatever the global context

The international context on the eve of COP 18 in November 2012 in Doha is not dissimilar to that before the Rio or Durban meetings. The EU is still distracted by the euro crisis, the United States has been preoccupied with its presidential election and world leadership is at a low ebb. As ADB President Donald Kaberuka has said, ‘the impact of the global economic crisis makes other agreements difficult’. According to two Chatham House experts, there is frustration over the (in)ability of the international community to implement lasting environmental solutions collectively – admittedly within an increasingly complex global context; international governance mechanisms are being called into question; and developed countries are distracted at home by democratic challenges to their economic austerity programmes.<sup>130</sup>

Looking back against this gloomy but realistic context, many will conclude that the Durban outcome is about as good as could have been expected in the circumstances and that Doha should now focus on implementation.

<sup>129</sup> IPCC, Fourth Assessment Report, 2007, [http://www.ipcc.ch/publications\\_and\\_data/ar4/syr/en/contents.html](http://www.ipcc.ch/publications_and_data/ar4/syr/en/contents.html).

<sup>130</sup> Robert Falkner and Bernice Lee, ‘Introduction’ to Special Issue: ‘Rio+20 and the Global Environment: Reflections on Theory and Practice’, *International Affairs*, Vol. 88. No. 3 (2012).

Africa and its friends have much to gain from encouraging that outcome to be translated into action. Just prior to Rio the G20 stated its commitment to 'full implementation of outcomes of Cancún and Durban', and supported 'inclusive green growth' and 'operationalization' of the Green Climate Fund. It called for a 'successful and balanced' outcome' to the next climate change conference.<sup>131</sup>

At the Doha COP the roles of Swaziland, as chair of the African group, and of South Africa – within the BASIC group and when representing Africa – will prove important. Will South Africa put wider African interests first?

### **Bandwagon for 'inclusive green growth' action at home**

Equipped with the latest knowledge, skills and – hopefully – resources, Africa's leaders and its private sector can also simply 'just do it'. Many countries have already realized that they should not delay taking forward their own 'green' country planning – both short- and long-term – for mitigation and adaptation. As one leading climate change scientist says, 'in Africa we need to believe in self-reliance [...] We can build our own continent.'<sup>132</sup> Although middle-income African countries have been hit hardest by the world economic downturn, several African countries expect relatively high future economic growth in comparison with developed countries. Some, as outlined above, have already led the world in talking of 'green growth' and have shown the way by showcasing their 'climate-resilient' policies and appropriate technology initiatives that are being developed, including the use of renewable energy.

There are common-sense opportunities for taking such action on the ground in each country. This is the message of the ADB, which promises to help those countries that have not already done so to launch their country-specific 'green' paths for that transition.<sup>133</sup>

It is thus open to African countries, regions, cities, local authorities and institutions to make appropriate plans and implement projects that can be financed domestically and/or with the help of international, private-sector or NGO partners, including (subject to progress on implementation) under the mechanisms agreed in Durban. This can be in cooperation with African institutions but also the World Bank and UN, developed- and emerging-nation partners, the domestic and international private sector and civil society, which all seem likely to want to support a particularly vulnerable continent, including through capacity-building as necessary.

As the late Ethiopian Prime Minister Meles Zenawi said: 'So long as we keep moving in the right direction and as fast as our legs can carry us we will most certainly reach our final destination – and in good time'.<sup>134</sup>

Can Africa exploit its rich natural resources and relative 'clean sheet' as regards industrialization to attract local and foreign direct investment by designing new green and climate-resilient growth policies and actions?

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<sup>131</sup> G20 summit communiqué, 20 June 2012.

<sup>132</sup> Mostafa K. Tolba, 'Foreward', in Pak Sum Low, *Climate Change and Africa*.

<sup>133</sup> Donald Kaberuka, Press conference, Rio de Janeiro, 21 June 2012.

<sup>134</sup> Meles Zenawi, speaking at COP 17, Durban, 6 December 2011, [http://unfccc.int/meetings/durban\\_nov\\_2011/statements/items/6584.php](http://unfccc.int/meetings/durban_nov_2011/statements/items/6584.php).



#### **Box 4: Some opportunities for African action**

At the World Economic Forum (WEF) on Africa in Addis Ababa in May 2012 one of the themes that had emerged in Durban, the opportunity presented for the continent and for investors from 'greening' Africa's growth, was strongly emphasized.<sup>135</sup> This was a useful meeting to precede Rio and to catalyse national action plans.

Some experts point out that a challenge for African countries henceforth is adaptation to future climatic deterioration and taking opportunities to participate in schemes for mitigation.<sup>136</sup> Discussions at the COP in Durban, the WEF in Addis Ababa and elsewhere indicate there are new opportunities for African countries to:

- plan for lower-carbon growth models (including in hydrocarbons sectors);
- invest in renewable energy, such as hydro-power, geo-thermal power, solar, wind and other renewables with private-sector and development-partner support;
- adapt to sustainable climate-resilient agriculture for green markets;
- prevent deforestation and forest degradation;
- and attract new low-carbon green industries, leapfrogging with new technology (as Africa has done with mobile phones) and innovative climate finance (while also retrofitting existing industries).

Former UN Secretary General Kofi Annan calls on policy-makers to move to 'climate-resilient and climate smart agriculture'<sup>137</sup> although new approaches are needed to accelerate understanding of climate impacts on crop yields.<sup>138</sup>

Given that 2011 was judged the costliest year on record for disasters on the planet, it also makes sense for Africa regionally and at country level to place 'measures to address disaster risk at the heart of economic and fiscal policy as well as imbedding them within sector-based economic and land-use planning'.<sup>139</sup>

Both the present and the former UN Secretary-General<sup>140</sup> call for good leadership on the issue. Mainstreaming climate change into continental and country-level decision-making remains an issue for all leaders on all continents. To avoid ineffective 'silo-ing' of decisions, heads of state/government and ministers of finance, environment and planning should integrate climate change considerations into national planning and decision-making.

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<sup>135</sup> World Economic Forum, Africa's Green Agenda, 10 May proceedings, [www.weforum.org/events/world-economic-forum-africa-2012](http://www.weforum.org/events/world-economic-forum-africa-2012). One speaker estimated growth in renewable energy in Africa at 384% in 2010; there was a view that creative public-private funding and insurance arrangements can help overcome inefficient and incomplete regulatory frameworks and sometimes inconsistent feed-in tariff regimes.

<sup>136</sup> Collier et al., 'Climate Change and Africa'.

<sup>137</sup> Kofi Annan, 'Importance of investment in Climate Smart Agriculture', Durban, 7 December 2011, 'Africa [is] a continent where four out of five of citizens are still dependent on agriculture for their survival [...] adaptive research could help to raise the productivity of crop and livestock production systems [...] link this research to practical programmes to improve land and water management, and the sustainable use of grazing lands [...] combined with soil fertility enhancement initiatives and the use of carbon- absorbing seed strains'.

<sup>138</sup> David Lobell et al., 'Nonlinear Heat Effects on African Maize as Evidenced by Historical Yield Trials', *Nature Climate Change*, 13 March 2011, <http://climatescienceafrica.blogspot.co.uk/2011/03/david-b-lobell-et-al-nature-climate.html>.

<sup>139</sup> Climate Change and Development Knowledge Network, 'Tackling Disaster Risk Management at the Heart of National Economic and Fiscal Policy', May 2012, [cdkn.org/2012/05/](http://cdkn.org/2012/05/).

<sup>140</sup> Ban Ki-moon, 'Ban urges leaders to make real progress at UN climate change talks', 6 December 2011, [www.un.org/apps/news/story.asp?NewsID=40635](http://www.un.org/apps/news/story.asp?NewsID=40635). Kofi Annan, speech at Columbia University, 23 September 2009: 'Each Head of State or Government has a responsibility to give clear instructions to their negotiators to make a deal in Copenhagen', [kofiannanfoundation.org/newsroom/press/2009/09](http://kofiannanfoundation.org/newsroom/press/2009/09).

## Implications for Africa's partners

Developed and emerging nations should meet commitments made. There are also implications when designing or redesigning their partnerships with Africa. This is particularly pertinent if there is consensus that tackling poverty and managing climate change are interlinked. In the word of Lord Stern, 'if we fail on one, we will fail on the other'.<sup>141</sup>

Some experts describe increased international complexity and expense, implicit in the ongoing discussions on how to generate global finance for the various mechanisms approved at Durban. As Paul Collier, Gordon Conway and Tony Venables put it:

In addition to their mitigation responsibilities, developed countries and the donor community must recognize that climate change will make poverty reduction objectives more difficult and more expensive. There will be direct financial burdens (e.g. from infrastructure needs) and a particular role for donors in providing the regional public goods which Africa lacks [...] Shaping new technologies so they are applicable in Africa, and developing regions more widely, may require public financial support.<sup>142</sup>

There are also questions of exactly how much finance is needed for climate change costs in developing countries and how to prioritize the use of already scarce finance.<sup>143</sup> Africa meanwhile continues to hope for new, additional and predictable funding.

Whatever the challenges, it is vital for both Africa and its partners to step up to the plate. The more delay, the higher the eventual costs seem likely to be. The clock is ticking. Taking early action is acknowledged to be in the interests of the continent's next generation: inter-generational equity is at stake.

## African leadership and ownership

African leadership, 'ownership' at all levels and genuine partnership are needed if initiatives are to be truly effective and sustainable. *How* people will be able to adapt should be integrated into development initiatives.<sup>144</sup> The success of actions to mitigate, adapt and take opportunities is likely to be linked to the extent of such an African drive. African political will to make progress in combating climate change will be critical.

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<sup>141</sup> Lord Stern, quoted in a media release of the Grantham Research Institute of Climate Change and the Environment and the Centre for Climate Change Economics and Policy at LSE, 11 December 2011, [http://www2.lse.ac.uk/GranthamInstitute/Media/Releases/2011/MR111211\\_climate-change-summit-durban.aspx](http://www2.lse.ac.uk/GranthamInstitute/Media/Releases/2011/MR111211_climate-change-summit-durban.aspx).

<sup>142</sup> Collier et al., 'Climate Change and Africa', p. 352.

<sup>143</sup> Smita Nakhooda, 'How Much Money Is Needed to Deal with Climate Finance?' Overseas Development Institute, August 2012, <http://www.trust.org/alertnet/blogs/climate-conversations/how-much-money-is-needed-to-deal-with-climate-change/>: 'Estimates of the costs of addressing climate change in developing countries vary substantially from \$480b to \$1.5 trillion per year.'

<sup>144</sup> Simon Levine, Eva Ludi and Lindsey Jones, 'Rethinking Support for Adaptive Capacity to Climate Change', Overseas Development Institute, December 2011, <http://www.odi.org.uk/publications/6213-accra-adaptive-capacity-development-interventions>.

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## About the Author

Bob Dewar CMG is an Associate Fellow of the Africa Programme at Chatham House, and was formerly a career diplomat with the UK Foreign and Commonwealth Office, serving as Head of Mission in a number of African countries – latterly as Ambassador to Ethiopia and Permanent Representative to the African Union, and then High Commissioner to Nigeria and Permanent Representative to ECOWAS.