Based on a review of the GLOBE Climate Legislation Studies [1 and 2] and desk-top research on climate change policies, laws and regulations from 17 international economies (including South Africa) and 5 African countries, this comparative review distills valuable information for peer learning among South African Members of Parliament, responsible for the advancement of climate change legislation in South Africa.
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1. Comparative Review: International Climate Change Legislation

1.1 Background
The aim of this document is to assist South African Members of Parliament in the promotion and advancement of South Africa’s climate change legislation. The first section of this research document provides a comparative review of climate change legislation from 17 international cases as well as governance support structures (including South Africa).

The main source of information for part 1 the document is the GLOBE Climate Legislation Study [1] and [2], which capture existing climate change-related legislation in 17 major economies of the world and serves as a fundamental resource for legislators. The studies were produced by the Global Legislators’ Organisation (GLOBE: www.globeinternational.info) in April 2011, in collaboration with the Grantham Research Institute on Climate Change and the Environment, at the London School of Economics and Political Science. The aim was twofold: to support legislators in advancing climate related legislation in their own countries through peer-to-peer learning and to highlight progress made in climate change legislation at national level in both industrialised as well as developing countries.

Major economies covered by the GLOBE studies include Brazil, Canada, China, the European Union (EU), France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, South Africa, South Korea, the United Kingdom (UK) and the United States of America (USA). Together, these countries account for nearly three-quarters of the world’s greenhouse gas (GHG) emissions. The Second GLOBE Study, released in December 2011, captures encouraging progress in the advancement of climate change legislation within several of the major economies, and includes Australia in the list of surveyed countries. The second GLOBE study was also reviewed for this document, making the total of economies covered 17.

South Africa is the only African economy covered in the GLOBE studies. Therefore, the second section of the research document provides a review of climate change legislation and policies from 5 African cases, to supplement the discussion on international cases.

The significance of reviewing and comparing national legislation is that it demonstrates relatively rapid progress in the drafting and promulgation of laws, policies and regulations that respond to the challenge of climate change, in great contrast to the slow and difficult progress in the UN climate negotiations. One of the breakthroughs achieved by GLOBE International was securing agreement on a set of ‘legislative principles on climate change’ in 2009. Legislators are believed to be the link between citizens and governments, their tasks include: to make the climate change case, win the political arguments against the opponents of climate action, drive political bargains and, most importantly, shape and advance national legislation that will help governments to go further in the international negotiations.

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The principles highlight five areas to be advanced through targeted legislation, in order to reduce 80% of global GHG emissions by 2020, even in the absence of an international agreement. These areas include building and appliance standards; low carbon energy production; industrial energy efficiency; vehicle fuel and efficiency standards; and land use and forestry.

1.2 Definition of climate change law
For the purpose of the GLOBE climate change legislation studies, climate change law is defined as:

‘Legislation, or regulations, policies and decrees with a comparable status, that refer specifically to climate change or that relate to reducing energy demand, promoting low carbon energy supply, tackling deforestation, promoting sustainable land use, sustainable transport, or adaptation to climate impacts.’

A survey of 16 countries yielded a total of 155 climate change-related laws. In the first GLOBE study, UK was documented to have 22 climate change-related laws (the most) while South Africa was documented to have 3 (the least).

1.3 Flagship legislation
The GLOBE studies note that the vast majority of integrative climate change laws, also called the flagship legislation for each country, were introduced since 2008, ahead of the COP 15 in Copenhagen. Various strands of pre-existing and new climate change regulation were then brought under one legislative umbrella, such as has occurred in Brazil, France, South Korea and the UK. The five-year plans of China and India serve a similar purpose.

Three key motivations for passing climate change laws were identified through discussions with legislators as: 1) economic factors, 2) international leadership and 3) awareness of vulnerability to climate change. Economic factors include competitiveness in the global market, availability of climate finance, concerns over energy security and the prospects of employment generation in low carbon industries. Pursuit of international leadership was shown by countries which worked towards passing climate change legislation often ahead of hosting a major international event including climate change forums. According to the GLOBE study, the causality here is not clear. However, it is suggested that the prestige that comes with hosting an event and the desire to demonstrate credible leadership has helped facilitate domestic action. Vulnerability to climate change is seen as a driver of climate change laws dealing with adaptation issues (as opposed to mitigation) and are pursued more heavily by developing countries. A good example is India’s National Mission for Sustaining the Himalayan Ecosystem, as part of the National Action Plan on Climate Change, to protect India’s water resources supplied primarily by the mountain range ecosystem.

The above drivers determine to a large extent the package of climate change laws which are adopted by a nation. South Africa debated the Green Paper on climate change ahead of its presidency of the UNFCCC in December 2011. Table 1.1 captures the flagship legislation in 17 international cases (including SA). The table lists each of the major economies, their emitter status, name of the flagship law, the date it was passed, carbon reduction goals (often as per the economy’s Copenhagen Accord pledge) and primary mechanisms for achieving those goals.
<table>
<thead>
<tr>
<th>Country (emitter status)</th>
<th>Name of law (date passed)</th>
<th>Carbon reduction goals</th>
<th>Mechanisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia (Top 20)</td>
<td>Clean Energy Act (2011)</td>
<td>Reduce emissions by 80% by 2050</td>
<td>Carbon pricing through a carbon tax; emissions trading scheme</td>
</tr>
<tr>
<td>Brazil (Top 5)</td>
<td>National Policy on Climate Change (2009)</td>
<td>Reduce emissions of up to 40% by 2020</td>
<td>Reducing deforestation by 80% by 2020 through Clean Development Mechanisms (CDMs)</td>
</tr>
<tr>
<td>Canada (Top 10)</td>
<td>Kyoto Protocol Implementation Act (2007)</td>
<td>Reduce emissions by 17% from 2005 levels by 2020</td>
<td>Minimum energy efficiency standards; development of clean technologies; regulate bio-fuels</td>
</tr>
<tr>
<td>China (Top 3)</td>
<td>12th Five Year Plan (2011)</td>
<td>Decrease carbon intensity of GDP by 17% by 2015; 40-45% by 2020</td>
<td>Increase share of non-fossil fuel primary energy consumption to 11.4%; increase forest coverage by 21.6%</td>
</tr>
<tr>
<td>France (Top 20)</td>
<td>Grenelle I and II (2009 and 2010)</td>
<td>A 75% cut in emissions by 2050; annual emissions of less than 140 MtCO2e</td>
<td>Research implementation of carbon tax and bio fuel production; thermal renovation of buildings; transport policies (carbon tax abandoned for now)</td>
</tr>
<tr>
<td>Indonesia (Top 5)</td>
<td>Presidential Regulation on the National Council for Climate Change (2008)</td>
<td>25% emission reduction by 2020 of which 80% results from deforestation</td>
<td>7 mitigation actions targeting: peat land management; reduction in deforestation; carbon sequestration through forestry and agriculture; energy efficiency; renewable energy sources; waste reduction; low-emission transportation</td>
</tr>
<tr>
<td>Italy (Top 15)</td>
<td>Climate Change Action Plan (CCAP) (2007)</td>
<td>Emissions reduction of 20% from 1990 unilaterally; move to 30% beyond 2012 as part of a global agreement</td>
<td>Energy tariffs for heavy energy usage; 10% increase in waste recycling; increased goods transportation through rail</td>
</tr>
<tr>
<td>Japan (Top 10)</td>
<td>Law Concerning the Promotion of Measures to Cope with Global Warming</td>
<td>25% from 1990 by 2020, premised on a global agreement</td>
<td>Increased monitoring of GHG emissions by government; establishment of a council for the reporting and implementation of the Kyoto Achievement Plan</td>
</tr>
</tbody>
</table>
### 1.4 Challenges and successes in 2011

The second GLOBE Climate Legislation Study was released eight months after the first one in order to inform the December 2011 Climate Summit in Durban, South Africa. Several nations witnessed significant progress in terms of proposed bills becoming laws, while others responded to natural disasters by re-considering their existing policies. Table 1.2 summarises changes in the legislative terrain, capturing both advancements in climate change policy formulation as well as challenges.

**Table 1.2: Breakthroughs and challenges in 2011**

<table>
<thead>
<tr>
<th>Country</th>
<th>Advances in CC legislation / unique aspects of implementation for peer learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>After extensive and politically charged debate, the Clean Energy Act was passed through the Senate in November 2011.</td>
</tr>
<tr>
<td>Brazil</td>
<td>The Green Allowance, a payments-for-ecosystem services scheme aimed at combating extreme poverty while emphasizing conservation, was created.</td>
</tr>
<tr>
<td>Canada</td>
<td>No recent comprehensive federal climate change legislation exists. Canadian provinces such as Ontario and Alberta have been very active with their own climate legislation.</td>
</tr>
<tr>
<td>China</td>
<td>2011 saw more detailed policies and measures to deliver the carbon and energy</td>
</tr>
<tr>
<td>Country</td>
<td>Action</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>European Union</td>
<td>Legislation came into effect setting emission performance standards for new light commercial vehicles. A new energy efficiency directive has also been proposed.</td>
</tr>
<tr>
<td>France</td>
<td>One of the key mechanisms agreed in the Grenelle was the carbon tax, which was finally abandoned by the government for reasons of national economic competitiveness.2</td>
</tr>
<tr>
<td>Germany</td>
<td>After the Fukushima disaster in Japan, the German government decided to bring forward the closure of its nuclear power plants. Target for renewable energy is increased to produce 35 per cent of electricity consumed in Germany by 2020.</td>
</tr>
<tr>
<td>India</td>
<td>India is a non-Annex I country under the Kyoto Protocol and thus has no binding target for emissions reduction. However, the country is an active participant in the Clean Development Mechanism (CDM) established by the Protocol. It has more than 520 registered CDM projects as of 30th August 2010.</td>
</tr>
<tr>
<td>Indonesia</td>
<td>A two-year moratorium on new applications for concessions on primary natural forests and peat lands was issued, under the terms of the USD 1 billion Letter of Intent between the governments of Norway and Indonesia.</td>
</tr>
<tr>
<td>Italy</td>
<td>Although the Climate Change Action Plan is endorsed by the Lower house, it is yet to be taken up by government as national policy. Other relevant climate change laws provide incentives for energy efficient buildings, transport and the use of biofuel.</td>
</tr>
<tr>
<td>Japan</td>
<td>Following the earthquake and resultant tsunami that crippled one of Japan’s nuclear power plants at Fukushima in March 2011, climate change legislation has dropped in priority as the government tackles its energy crisis and re-thinks its energy strategy.</td>
</tr>
<tr>
<td>Mexico</td>
<td>Further draft comprehensive climate change laws were proposed in Congress. There is consensus to consolidate three draft bills into a single bill, by end of 2011.</td>
</tr>
<tr>
<td>Russia</td>
<td>As one of the main suppliers of oil and gas globally, Russia has passed several laws over the last decade to improve energy conservation and efficiency.</td>
</tr>
<tr>
<td>South Africa</td>
<td>No comprehensive climate change law at present. The National Climate Change Response White Paper was published in October, 2011 and a vote in National Assembly is expected soon.</td>
</tr>
<tr>
<td>South Korea</td>
<td>Draft of Acts on Emissions Trading Scheme, which covers heavy emitters producing more than 25,000 tons of CO2 per year, was released in April 2011 and is under parliamentary consideration for passage by the end of 2011.</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>A decision was taken to set up the Green Investment Bank with an initial capitalization of GBP 3 billion, to begin operation in 2012/13.</td>
</tr>
<tr>
<td>United States of America</td>
<td>No integrative climate change legislation is in place at federal level. However, climate change policy is tightly linked to federal energy policy. Recent years have witnessed several bills proposed by US Congressmen focused on renewable energy and energy efficiency and consistent review of existing RE and EE legislation.</td>
</tr>
</tbody>
</table>

1.5 Structure and purpose of climate change institutional bodies

This section of the research document draws attention to various ministerial and parliamentary climate change legislation committees, councils and task forces established by various economies. Some of these have an international focus, such as the Council of Ministers for Global Environmental Conservation, while others are highly integrative of the full spectrum of national climate change policies, such as Mexico’s Inter-secretariat Commission on Climate Change; while others focus on specific pieces of legislation, such as Indonesia’s Climate Change Working Group within the Ministry.

2 The French government announced that the carbon tax would be postponed, and that it would strongly push for a European border carbon tax, before implementing a carbon tax at the national level.
of Forestry. Some have been functional for decades, such as the Environment Protection Agency of USA, while others are dedicated bodies, established for a short-term, to complete specific policy research or implementation tasks, such as Japan’s Committee on Climate Change Impacts and Adaptation Research and Indonesia’s Reducing Emissions from Deforestation and Forest Degradation (REDD)+ Agency.

Table 1.3 aims to unpack the way in which different countries have established various institutional bodies in response to the specific needs of their climate change legislative process.

**Table 1.3: Climate change committees and roles**

<table>
<thead>
<tr>
<th>Country</th>
<th>Agencies active in the area of climate change / energy</th>
<th>Committee role and tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Climate Change Authority</td>
<td>Advise on pollution caps, progress towards meeting targets, and undertake regular reviews of the carbon pricing mechanism</td>
</tr>
<tr>
<td>Brazil</td>
<td>Inter-ministerial Committee on Climate Change</td>
<td>Developed the National Plan on Climate Change; an Executive Group on Climate Change created within the ICCC charged with creating, monitoring and evaluating the National Plan</td>
</tr>
<tr>
<td></td>
<td>National REDD+ Commission</td>
<td>Charged with deciding on rules, conditions and foundations of the REDD+ system, is to be formed by representatives from government, civil society, private sector and academia</td>
</tr>
<tr>
<td></td>
<td>Consultative Council for the National Fund for Forest Development (NFFD)</td>
<td>Members from the federal administration and civil society charged with overseeing the disbursement of funds and evaluate performance</td>
</tr>
<tr>
<td></td>
<td>Coordinating Commission of Ecological-Economic Macrozoning (MacroZEE)</td>
<td>Establish monitoring indicators and conduct evaluations of the MacroZEE in the Legal Amazon every two years</td>
</tr>
<tr>
<td>Canada</td>
<td>Canada Foundation for Sustainable Development Technology</td>
<td>Finance and support development of clean technologies which provide solutions to issues of climate change, clean air, water and soil quality</td>
</tr>
<tr>
<td>China</td>
<td>The Environment Protection and Resources Conservation Committee</td>
<td>Develop a comprehensive climate change law</td>
</tr>
<tr>
<td>European Union</td>
<td>The European Commission</td>
<td>Propose and monitor the implementation of climate change directives and decisions: CARE package, White Paper on Adapting to Climate Change, REDD policies and transport policies</td>
</tr>
<tr>
<td>France</td>
<td>Comité national du développement durable et du Grenelle de l’Environnement</td>
<td>Chaired by the Ministry of environment, the inter-ministerial delegate for sustainable development, it includes several groups. Monitors the implementation of measures adopted in the Grenelle Laws and reports once a year to the parliament; conducts formulation, monitoring and evaluation of sustainable development and biodiversity national strategies</td>
</tr>
<tr>
<td>Germany</td>
<td>National Committee on Global Change Research</td>
<td>Since 1996, the advisory committee acts as the national co-ordinator for the four international Global Change Research programmes, identifies</td>
</tr>
<tr>
<td>Country</td>
<td>Key issues for future research strategies</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td><strong>German Council of Environmental Advisors</strong> Report on the present environmental situation in the country, analyse harmful developments and indicate possibilities for mitigation</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>German Advisory Council on Global Change</strong> Evaluate scientific knowledge concerning all aspects of global environmental change in the interdisciplinary context of the Earth system, and formulate recommendations for political action</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td><strong>Advisory Council on Climate Change</strong> Chaired by the Prime Minister, multi-stakeholder body, reviews implementation of the National Action Plan on Climate Change, the research agenda and provides guidance on matters relating to international negotiations</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Expert Group on Low Carbon Strategy for Inclusive Growth</strong> Develop a roadmap for India for low carbon development</td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td><strong>National Council for Climate Change</strong> Created in 2008 through a Presidential regulation. Formed by 17 Ministers and chaired by the President, in charge of coordinating national CC policies and international positions, and the creation of a cap-and-trade mechanism</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>REDD+ Task Force</strong> Established to implement the Presidential Instruction No 10 of 2010 to postpone the granting of new licenses for natural forest land and peat forests</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>REDD+ Agency</strong> Enacted in 2011 to implement Presidential Instruction No 25 of 2011: implement the Letter of Intent between the Government of Indonesia and Norway (continue REDD+ task force work)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Climate Change Working Group within the Ministry of Forestry</strong> Provide input to the Forestry Minister regarding policies on, and processes and mechanisms of climate change mitigation and adaptation measures</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>National Taskforce for Energy and Water Efficiency</strong> Researching, planning and preparing policies, strategies and programs for energy and water efficiency</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td><strong>Italian Parliament’s Environment Committee</strong> Proposed the comprehensive climate change action plan for consideration by the lower house</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td><strong>Council of Ministers for Global Environmental Conservation</strong> Established in May 1989, with six key directives including formulating an international framework for protecting the global environment; promote the observation (monitoring) and research of the global environment; pursue the transfer of technology; strengthen environmental consideration regarding the implementation of official development assistance</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Committee on Climate Change Impacts and Adaptation Research</strong> Conduct intensive reviews of how global warming affects all aspects of climate, natural environment and social systems</td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td><strong>Inter-secretariat Commission on Climate Change (CICC – Spanish acronym)</strong> Created through a presidential agreement, includes the Secretariats of Foreign Relations; Social Development; Environment and Natural Resources; Energy; Economy; Agriculture; and</td>
<td></td>
</tr>
</tbody>
</table>
1.6 Coverage and focus of climate change legislation

Through the adoption of certain policies and the establishment of dedicated oversight and monitoring committees, national governments target those sectors which are believed to generate maximum impact for climate change mitigation or adaptation in their economies. Policy measures include carbon pricing, overcoming energy efficiency barriers, technological change towards low carbon energy production, and effective transport, land-use and forestry policies. In addition, building and appliance standards, industrial energy efficiency standards and vehicle fuel and efficiency standards are instruments which assist in translating policies into action. Table 4 depicts the degree of coverage of various carbon management policies by the 17 case countries.
1.7 Key observations
This research document focuses on an overview of existing legislation and the legislative process in international case countries and does not include any form of policy analysis. However, during the review of climate change policies, acts, relevant institutional structures, and media reports and scholarly articles covering these, some high-level and cross-cutting trends were observed which are discussed below.

Adaptation versus mitigation
Examples of climate change legislation captured in the GLOBE studies represent great progress among both developing and developed countries in the passing of laws focused on mitigation efforts. Legislation in four of the five areas which the studies focus on (building and appliance standards; low carbon energy production; industrial energy efficiency; vehicle fuel and efficiency standards), is aimed at reducing GHG emissions, which means climate change mitigation. The last area of forestry and land use would have both mitigation and adaptation benefits. In the main however, climate change legislation is yet to give sufficient attention to the challenge of human settlements adapting to unavoidable climate change. Developing countries especially and their cities in particular, would need to plan for the multiple stresses that will result from the two trends of increasing mean temperatures and increasing urbanisation. This point is supported by the second part of the research document where the focus in African nations is shown to focus much more on adaptive measures, through climate change policies, and relatively less on mitigation.
The energy-water nexus
A key concern raised by scholars\(^3\) is the manner in which climate change policies are impacting on the future use of water and freshwater ecosystem services. Synergies and contradictions between national climate change legislation and sustainable water management is examined using examples from Brazil, China, India, Mexico, South Africa and Tanzania as a group and Australia, EU, England and Wales as a group, to highlight commonalities among developing and developed jurisdictions. Structural adjustments in the energy sectors of several economies signal an increase in carbon sinks, hydro-electric power generation and nuclear power generation. These shifts create stresses on global freshwater systems from maladaptive policies, even in the absence of imminent climate change and population growth.

The science-policy interface
Governments face the challenge of incorporating current and rigorous scientific and technical knowledge in the development and implementation of climate change policies. Climate change policy is said to be “an area which is generally too political for scientists and too scientific for politicians.”\(^4\) Thus intermediaries between scientists and policy-makers are responsible for generating technical information in an accessible format, upon which sound policies can be based. Conversely, policy-makers need to keep abreast of latest and internationally respected climate change forecasts (such as the IPCC reports); policies adopted by other governments on the basis of available information (such as those covered in the GLOBE Legislation Study); as well as current trends in the adoption of lower carbon technologies, mechanisms and standards (as those reported in the World Energy Outlook, the REN 21 reports). Examples of intermediaries in the science-policy interface include POST in the UK, TERI (The Energy Research Institute) in India and the ERC (Energy Research Centre) and SI (Sustainability Institute) in South Africa.


\(^4\) Harald Winkler (Group Leader: Energy and Climate Change, ERC) quoted at a talk at the Sustainability recounting the challenges faced by negotiators at COP15 in Copenhagen in December, 2010.
2. Case reviews: 5 African countries

2.1 Background
This part of the research document surveys the progress made in the drafting of climate change legislation in 5 African countries: Kenya, Nigeria, Ethiopia, Botswana and Egypt. Only the first two countries listed have dedicated climate change legislation, albeit in draft form. The case studies are drawn from a number of reports by international organisations on each country’s response to the challenge of climate change in the form of emissions mitigation or adaptation preparedness. The write-ups explore each case individually, resulting in a description of climate change in relation to existing developmental and environmental challenges. The policy landscape pertinent to climate change in Africa is intrinsically tied to existing environmental laws as well as policies that deal with high levels of poverty, water deficiency and energy security.

Each of the case reviews considers: the key aspects of the population’s vulnerability to climate change and in some instances the contribution to climate change by the economy; critical components and status of the flagship legislation and other relevant policy documents; relevant government institutions; and non-government agencies involved in a technical advisory or political advocacy role around climate change legislation.

The conclusions include summaries of flagship legislation and in the absence of flagship legislation, policy documents which reflect the country’s position with respect to climate change. A summary of institutional structures which address climate change in conjunction with other developmental concerns such as energy, agriculture, poverty and environment, the location of the principal structures, and the tasks of such structures is also included.

2.2 Kenya

2.2.1 Vulnerabilities and contribution to climate change
Land-use change is the main contributor to greenhouse gas emissions in Kenya, which also renders ecosystems vulnerable to extreme weather events, and at the same time erodes the natural resource base available to communities. High population growth and economic expansion has led to encroachment on forests and savannah land for agricultural and pastoral farming, wood fuel and timber for construction. The second primary contributor to emissions in Kenya is energy consumption, in the form of wood fuel and fossil fuel. Further industrial advancement correlates strongly with increased energy consumption, and therefore increased emissions.

Comprehensive climate change legislation for Kenya would need to address ways of mitigating current sources of emissions by changing current energy systems towards more sustainable ones, and at the same time address direct and indirect environmental impacts of land-use change such as widespread deforestation and worsening drought.

2.2.2 Components and status of the flagship legislation
The draft Climate Change Bill, 2010 is intended to provide directions on how Kenya will mitigate and adapt to climate change. The proposed bill requires update of planning and building regulations to reduce greenhouse gas emissions. The draft bill also proposes the establishment of a National Clean
Energy Development Mechanism Authority (NCEDMA). The NCEDMA will complement the proposed climate exchange platform (the Nairobi Climate Exchange) planned to facilitate trading in carbon credits and open up financing for renewable energy and forestation projects. The Authority will evaluate CDM projects to assess qualification for investment.

The country’s constitution requires that all Kenyans have the opportunity to see bills before they are voted on by parliament. As part of that process, the draft bill on climate change adaptation and mitigation is now being discussed in communities around Kenya. The discussions, led by the Kenya Climate Change Working Group (KCCWG), have mined a deep vein of traditional knowledge about the region’s forests, pastureland and waterways, and collected a range of views on what should be done to address climate-related problems in Kenya. Concerned community members hope that traditional wisdom will be incorporated in the Climate Change Bill.

Kenya also has the National Climate Change Response Strategy (NCCRS). The NCCRS’s primary focus is ensuring that adaptation and mitigation measures are integrated in all government planning, budgeting and development objectives. The strategy has called for collaborative and joint action with all stakeholders (private sector, civil society NGOs, faith-based organisations and others) in tackling the impacts of climate change. Proposed mitigation interventions include projects of the Kenya Forest Service’s Forestry Development Plan, such as growing 7.6 billion trees in the next 20 years.

2.2.3 Government institutions for climate change

The Kenyan government established the National Climate Change Activities Coordinating Committee (NCCACC) in 1992 as a requirement under the United Nations Framework Convention on Climate Change (UNFCCC). Its members are drawn from ministries of agriculture and forestry, energy, planning, finance, industry, research and technology, municipal councils, public universities, the private sector and from non-governmental organizations. The NCCACC aims to, among others:

- ensure the establishment of a properly networked database on climate change, impact and response strategies, and research activities;
- identify and facilitate development of national research programs on climate change, impacts and responses strategies and options, and advise the government on studies for which funding by the Global Environment Facility (GEF) or any other international financial mechanisms is required;
- identify research projects requiring regional and international cooperation and identify scientists who could be called upon to undertake specific research in climate change;
- create public information and awareness;
- assist with the preparation of information to the IPCC and other bodies concerned with climate issues, and ensure the formulation of appropriate national responses to issues which may be raised at national and international levels;
- advise the government on climate change-related aspects requiring policy guidance;

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5 http://www.theredddesk.org/plan/national_climate_change_response_strategy_kenya
and advise the government on the implications of commitments under the UNFCCC on climate change and related issues

### 2.2.4 Climate change agencies

**FAN** (Forest Action Network) is a networking NGO with its head office in Nairobi. Established in 1995, FAN has since worked with local communities, policy makers and researchers to develop a niche in advocating for an improved policy and legislative climate to support the sustainable management of natural resources. With stakeholders at the local, national, regional and international levels, FAN's scope of operation gives it both a national and international outlook. FAN is consulted on many issues related to forest management and played a significant role in developing Kenya's new Forest Policy and Forests Legislation (Forests Act 2005).

**KCCWG** (Kenya Climate Change Working Group): The agency was formed in April 2009, as a resolve by members of various civil society organisations and donor partners in Kenya, to come together to form a united front in confronting the causes and effects of climate change in broad and specific terms in Kenya, and elsewhere where their contribution would be needed. Its formation coincided with a request for support to Honourable Franklin Bett, a member of the 10th Parliament, to come up with a Climate Change Bill. The issues of concern include the continued livelihood threats posed by climate change, the fact that Kenyan people are among the most vulnerable groups and the need to unite in diversity to enhance the advocacy, create synergies on their strengths and strengthen climate response actions.

### 2.3 Nigeria

#### 2.3.1 Vulnerabilities and contribution to climate change

Nigeria faces vulnerabilities from climate change directly through environmental impacts such as increased desertification in the north of the country, changing rainfall patterns and flooding which threaten the livelihoods of farmers and deepen rural poverty; and the increased risk from rising sea level in the south of the country which could displace millions and submerge large parts of Nigerian cities including the capital city, Lagos. Preliminary studies on the vulnerability of various human and natural sectors of the Nigerian economy to climate change found that none of the sectors, including energy, human settlements, water resources, freshwater and marine ecosystems, industry and forestry, were unaffected by the long term impacts of climate change.

Nigeria also faces indirect, economic uncertainties from climate change as the world’s leading economies shift to non-fossil fuel based sources of energy in order to curb their contribution to greenhouse gas emissions. Successful implementation of climate change mitigation policies would thus have a dire impact on the Nigerian oil sector, which represents 41% of the country’s GDP, according to a 2002 World Bank report.

Comprehensive climate change legislation in Nigeria would thus need to address issues of direct adaptation to climate change for a range of economic sectors, address environmental pollution due to oil exploration and gas flaring, and guide progress towards a more diversified economic policy.
2.3.2 Components and status of the flagship legislation

A bill establishing a Climate Change Commission for Nigeria is ready for Presidential assent. The commission would be responsible for establishing an institutional governance framework and ensure the proper co-ordination of various ministerial departments and agencies towards a national response to climate change, including the development of a national strategy for the reduction of greenhouse gas emissions and regulation of the carbon market in the country. The commission will be chaired by the vice-president. The proposed commission will be a strong and independent body under the Presidency charged with the coordination of existing institutions, setting out of priorities, and development of action plans and expansion of international cooperation. It is anticipated to bring together several agencies of government currently working on climate change, which include the following policies and frameworks:

- **Climate Change Policy and Response Strategy**: fostering a low-carbon, high growth economic development path and building a climate resilient society;
- **Strategic Framework for Voluntary Nationally Appropriate Mitigation Action (NAMA)**, in process, as a step towards meeting national obligations under the UNFCCC;
- **First National Communication** to the UNFCCC; and

The Climate Change Commission Bill is not yet enacted into law. The bill was introduced in the Nigerian Parliament (comprising of the Senate and the National Assembly) in 2007. Both houses passed the bill after months of deliberation and debate and there was great public expectation that the President would sign the bill ahead of COP17. Passing of the bill remains a contentious issue.⁷⁸

2.3.3 Government institutions for climate change⁸

The Government of Nigeria acknowledges the importance of developing a national response to climate change, and is taking steps to build a governance structure to manage the issue. The Government established a national focal point to drive Nigeria’s response: the Special Climate Change Unit within the Federal Ministry of Environment. The government also mobilised the Inter-ministerial Coordinating Committee on Climate Change. In 2010, the National Assembly passed a bill to create a national Climate Change Commission, which, once established, will likely facilitate coordination and support for the multi-level and cross-sectoral adaptation responses. In addition, several other government agencies are involved in climate change adaptation issues, including for instance the Nigerian Meteorological Agency, the National Emergency Management Authority and the National Planning Commission.

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⁸ This section from the BNRCC report: [http://nigeriaclimatechange.org/NASPA-CCN%2OBNRCC%20Edition%20FINAL.pdf](http://nigeriaclimatechange.org/NASPA-CCN%2OBNRCC%20Edition%20FINAL.pdf)
2.3.4 Climate change agencies

Nigeria benefits from the work of several non-government agencies, working towards building capacity in the country’s institutions and communities to confront climate change. Some of the more prominent agencies are discussed below.

BNRCC (Building Nigeria’s Response to Climate Change): aims to help build informed responses to climate change in Nigeria by enhancing capacity at the community, state and national levels to implement effective adaptation strategies, policies and actions. The BNRCC project is funded by CIDA (the Canadian International Development Agency). The BNRCC project’s technical work is organised around research, policy advice, adaptation projects and outreach activities.

NEST (Nigerian Environmental Study/Action Team): Founded in 1987, NEST is an independent not-for-profit organisation dedicated to research and action on environment and sustainable development. NEST has the overall goal of acting in concert with an active nationwide membership to sensitise and empower Nigerians through research, dissemination of factual information, policy dialogue, public awareness and promotion of sustainable livelihoods. The organisation has maintained close relations with parliamentarians, policy makers, and the Federal Ministry of Environment and has contributed to discussions on mainstreaming climate change.

NigeriaCAN (Nigeria Climate Action Network): A network of groups and individuals in Nigeria working to promote government and individual action to combat climate change. Members work to achieve this goal through the coordination of information exchange and civil society strategy on national and international issues and include the public and private sector, NGOs, international development organizations and change-focused individuals. The advocacy work by NigeriaCAN and the International Centre for Energy, Environment and Development (ICEED) resulted in the Climate Change bill being introduced to the Nigerian Parliament.

CUSO-VSO is a non-profit development agency that works through volunteers. VSO Nigeria has worked on the issue of climate change for several years under its secure livelihoods programme. Together with NigeriaCAN, VSO advocates research and forward planning to Nigeria’s government officials\(^9\). VSO Nigeria is an implementing partner of BNRCC projects.

2.4 Ethiopia

2.4.1 Vulnerabilities and contribution to climate change\(^10\)

Over the past three decades, Ethiopia has experienced countless localized drought events and seven major droughts, with five resulting in famines. These have been compounded by unsustainable practices such as over-cultivation, overgrazing, erosion, and deforestation. The majority of Ethiopia is arid, semi-arid, or categorized as dry sub-humid, all areas which are prone to drought which is the single most important climate related natural hazard impacting the country. The other climate related hazard that affects Ethiopia from time to time is floods, resulting in huge loss of life and


\(^10\) [http://unfccc.int/resource/docs/napa/eth01.pdf](http://unfccc.int/resource/docs/napa/eth01.pdf)
property, and migration of people. In recent years, Ethiopia has witnessed worsening of environmental problems. The country’s extreme vulnerability to climate change is linked to very high dependence on rain fed agriculture which is very sensitive to climate variability and change. Compounding factors include under-developed water resources, low health service coverage, high population growth rate, low level of economic development, low adaptive capacity, inadequate road infrastructure and weak institutions.

Appropriate climate change legislation in Ethiopia will therefore need to address the current lack of climate change resilience among various sectors in the country, and in particular agriculture, water security and human health.

2.4.2 Components and status of the flagship legislation

Ethiopia recently developed a new strategy: the Climate-resilient Green Economy (CRGE)\textsuperscript{11}. Since February 2011 the CRGE initiative\textsuperscript{12} under the leadership of the Prime Minister’s Office, the Environmental Protection Authority, and the Ethiopian Development Research Institute, has been developing a strategy to build a green economy. Seven sectoral teams involving more than 50 experts from more than 20 leading government institutions have been driving the initiative. The objective is to identify green economy opportunities that could help Ethiopia reach its ambitious growth targets while keeping greenhouse gas emissions low. The government intends to attract development partners to help implement this new and sustainable growth model.

In addition, a number of national policy initiatives, programs and strategies that may directly or indirectly address climate change adaptation have been developed. These include Plan for Accelerated and Sustainable Development to end Poverty (PASDEP), Environmental policy of Ethiopia, Agriculture and Rural Development Policy and Strategy, Water resources Management Policy, Health Sector Development Policy and Program and the National Policy on Disaster Prevention and Preparedness.

Furthermore, the National Adaptation Program of Action (NAPA) is a mechanism within the UNFCCC, designed to help the Least Developed Countries (LDCs) including Ethiopia to identify their priority adaptation needs to climate change and to communicate these needs to the Conference of Parties (COP) of the UNFCCC and other concerned bodies. The Government of Ethiopia finalised its NAPA\textsuperscript{13} in 2008 under the leadership of the National Meteorological Services Agency (NMSA) and is mobilising financial resources for its implementation.

The drafting of a national climate change strategy\textsuperscript{14} and the second Ethiopian Plan for Accelerated and Sustainable Development to end Poverty (PASDEP2) is also underway.

\textsuperscript{11} Based on article on UNDP’s Africa Adaptation Program: \url{http://www.undp-aap.org/countries/ethiopia}
\textsuperscript{12} Summary of the findings of the CRGE initiative: \url{http://www.undp-aap.org/sites/undp-aap.org/files/Ethiopia%20CRGE%20Strategy%20Final.pdf}
\textsuperscript{13} \url{http://unfccc.int/resource/docs/napa/eth01.pdf}
\textsuperscript{14} Information on Ethiopian CC policy: \url{http://community.eldis.org/.59d669a7/Final%20Ethiopia%20Policy%20Review.pdf}
2.4.3 Government institutions for climate change
The National Climate Change Forum (NCCF) was launched in July 2008 by a Task Force chaired by the Ministry of Agriculture and Rural Development of Ethiopia. There are several institutions in Ethiopia that have responsibilities that directly or indirectly relate to climate change. However, their efforts are not well articulated, documented, and shared for the purpose of developing national policy. It is envisioned that the NCCF will play a vital role in bringing this issue to the attention of political leaders, philanthropists, and general public. The development of a national climate change strategy will be part of the NCCF’s co-ordinating role.

2.4.4 Climate change agencies
The non-government sector in Ethiopia is populated with agencies which are either institutionally linked to or funded by international donor agencies such as UK’s Department for International Development (DFID), the World Bank (Economics of Adaptation to Climate Change study) and SIDA (Swedish International Development Agency).

EEPFE (Environmental Economics Policy Forum for Ethiopia) works to support poverty alleviation and sustainable development in Ethiopia through an increased use of environmental economics in policy making processes. The forum was founded in 2003.

FAC (The Future Agricultures Consortium) was established in 2005 “to encourage dialogue and the sharing of good practice by policy makers and opinion formers in Africa on the role of agriculture in broad based growth” through critical research and reflection, facilitating networking and partnerships, and building a platform for policy dialogue. The Consortium is currently working in Ethiopia, Kenya and Malawi, with the aim of addressing an observed gap in research and understanding of policy processes on climate change and agriculture.

2.5 Botswana

2.5.1 Vulnerabilities and contribution to climate change
Botswana is a landlocked and arid to semi-arid country, with unreliable and unevenly distributed rainfall. The country is highly vulnerable to seasonal variations in climate. About two-thirds of the country are covered by the Kalahari Desert sands, and are unsuitable for agricultural production. Botswana’s economic performance is linked to its natural resources such as minerals, land for agriculture and pasture, and wildlife tourism. Mining is associated with greenhouse gas emissions and environmental pollution; while other persistent environmental problems such as land degradation, water scarcity and depletion of wood and forest products are linked to unsustainable agricultural and livestock practices, tree-felling and the growing human population. It is predicted that climate change will lead to the increased incidence of both floods and droughts in Botswana. Furthermore, higher water temperatures and changes in extremes due to climate change may exacerbate many forms of water pollution. Water supply reliability, health, agriculture, energy

and aquatic ecosystems will feel the impact of these changes to the water cycle. There are limited sources of surface water (in the form of rivers, lakes and ponds) and over 60% of the Botswana population relies on groundwater. The rural poor are most vulnerable as they rely on groundwater for all their water needs.

According to the government of Botswana, the welfare of the people, the state of the environment and the performance of the economy are all very closely linked to the impact of climate change.

### 2.5.2 Components and status of the flagship legislation

There is no dedicated policy or strategy that addresses climate change mitigation or adaptation in Botswana. Primarily because there is no specific requirement in the UNFCCC texts for parties other than Least Developed Countries (LDCs) to develop and implement a National Adaptation Program of Action (NAPA). Since Botswana is not an LDC, it does not have a NAPA.\(^{16}\)


Actions taken so far for climate change mitigation and adaptation include: consultation on energy policy and energy master plan, aggressive plan to diversify energy production options to include renewables (solar and biofuels), promotion of energy efficiency/management, rural electrification (solar home systems) to reduce stress on wood and vegetation for energy purposes.

### 2.5.3 Government institutions for climate change

Countries that ratified the Kyoto protocol are expected to institute Designated National Authority (DNA) to control, promote, recommend and approve projects to qualify for CDM benefits. In Botswana, the Meteorological Services Department (DMS) has been established as the DNA, with offices and weather stations in most parts of the country. The DMS is also the Secretariat of the National Climate Change Committee (NCCC) a select committee of the Parliament, which is to provide climate change direction and drive actions and strategies. The NCCC was created to address climate change matters more holistically at legislative level and commissioned a technology needs assessment to investigate mitigation.

In addition, a National Climate Change Coordinator was appointed early in 2010 to provide resource and skills within the Ministry of Environment, Wildlife and Tourism (MEWT). The MEWT has the main responsibility for environmental management in Botswana. Other important government institutions are the Ministry for Mines, Energy and Water Resources, and the Ministry of Agriculture. A number of parastatals such as the Water Utilities Corporation responsible for urban water supply and the Rural Industries Promotion Corporation (for solar energy and water harvesting) are also involved in environmental activities.

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2.5.4 Climate change agencies
Botswana enjoys a stable economy and a favourable environment for international collaboration and transactions. Agencies such as SIDA, DANIDA (Danish International Development Agency), IIED (International Institute for Environment and Development) and DfID are involved actors in the climate change and environmental policy research arena in the country.

NGOs and community based organizations (CBOs) play important roles in service provision and implementation of environmental and conservation projects, and have been operating in the country for more than three decades. There has been a concerted effort by government to rationalise environmental institutions, which should reduce overlaps, clarify roles and increase effectiveness. The Botswana Council for NGOs (BOCONGO), an umbrella organisation for NGOs, is expected to coordinate cohesive implementation of climate change initiatives.

2.6 Egypt
Egypt is a typical example of a developing country which is highly vulnerable to climate change and faces numerous threats to its economic, social and environmental sustainability – including energy, water, and food security. This causes enormous fundamental pressures on Egypt’s competitiveness, and presents a growing threat to national security. The threats are fuelled by a growing population and rising associated demand, coupled with the constraints of a finite resource base.  

2.6.1 Vulnerabilities and contribution to climate change
According to the Egyptian government, there are three main climate change priorities: sea level rise, water resource deficiency, agricultural crop deficiency and extinction of some crops. The Intergovernmental Panel on Climate Change (IPCC) estimates that the Mediterranean Sea will rise by a metre by 2050 as a result of global warming, causing the loss of one third of the Nile delta. Along with the loss of important living and agricultural area, Egypt’s industrial cities and some important historic sites like Alexandria, Damietta, Rosetta, Edco and Port Said would be affected by the Mediterranean Sea inundation. As a result, human displacement of the magnitude of tens of millions of people is expected.

Agriculture in the delta region uses the Nile’s water almost to the last drop. The delta also faces serious water quality deterioration through the accumulation of fertilisers, sewage and industrial waste. Adding to potential water scarcity scenarios for the future is the Nile Basin Initiative (NBI), through which the Nile riparian countries (Ethiopia and Tanzania) are trying to change the traditional water quota allocation to Egypt and Sudan. Although Egypt is one of the most vulnerable countries to climate change, it only contributes 0.5% to global GHG emissions. Climate change response by the government is therefore focused on climate change adaptation and monitoring of environmental threats and exposures.

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17 This comment drawn from an expert perspective on the World Resources Report website: http://www.worldresourcesreport.org/responses/egypt-sekem-and-climate-change
2.6.2 Components and status of the flagship legislation

Egypt does not have climate change-specific policy or legislation, although the country has ratified the UNFCCC. The government has been mainstreaming climate change adaptation into existing national policy and investment frameworks, including increased CDM financing opportunities.

In lieu of a climate change policy, the Egyptian Environmental Affairs Agency (EEAA) put forth its Initial National Communication on Climate Change in June 1999. The umbrella environmental law in Egypt is Law 4 of 1994, which deals with the protection of the environment, and which was amended by Law 9 of 2009. The law assigns the roles and responsibilities of the Ministry of State for Environmental Affairs (MSEA) and EEAA. The law and its executive regulations govern data collection for environmental planning, studies and reports and the integration of environmental information into a national action plan.

As part of this monitoring and enforcement role, MSEA prepared a second National Communication to the UNFCCC and a greenhouse gas (GHG) inventory covering different sectors in 2007.

2.6.3 Government institutions for climate change

The two government institutions at the forefront of environmental law and its implementation are the MSEA and the EEAA. EEAA encourages private sector investment in clean energy, waste recycling and afforestation. It initiated a three-year Climate Change Risk Management Programme in May 2009, which addresses national climate change adaptation and mitigation issues involving multiple ministries and sectors. MSEA has prepared directives for private sector investments in clean energy, waste recycling and afforestation enterprises.

The Ministry of Electricity and Energy (renewable energy and energy efficiency projects), the Ministry of Water Resources and Irrigation (shoreline protection projects) and the Agriculture Research Centre (adoption of heat tolerant cultivars) are active agents in both mitigation and adaptation efforts. The Ministry of Communications and Information Technology is also closely involved in Egypt’s climate change initiatives, both as a partner in the development of environmental information systems, and as an active participant in climate change conferences.

The executive formed an inter-ministerial National Climate Change Committee (NCCC) in 1997, and restructured it in 2007, so that it can function as the effective coordinator of climate change on the national level. The committee is chaired by EEAA’s executive officer and its members encompass a broad range of governmental, academic and non-governmental representatives. The committee facilitated the establishment of Egypt’s Climate Change Action Plan (CCAP) in 1999. In a newer version of the CCAP, the committee is putting out ideas for needed strategies, policies, and the mechanisms for their implementation. The CCAP has also been instrumental in coordinating governmental, non-governmental and private sector climate change projects with substantial international financial and technical aid.

Egypt signed the Kyoto Protocol in 1999 and ratified it in 2005, which led to the establishment of the Egyptian Designated National Authority for the Clean Development Mechanism (DNA-CDM) in 2005. The DNA has achieved tangible progress in several sectors, 36 projects have been approved within
the framework of the mechanism. The projects are located in a range of sectors: new and renewable energy, waste recycling, afforestation, energy efficiency, and the use of natural gas.

2.7 Conclusions for case reviews of 5 African cases
The key lesson for policy-makers in South Africa, revealed through the review of African counterparts, is that governments respond to the challenge of climate change as it impacts upon particular economies and populations. Policy-makers also respond to their obligations as per international conventions, and are guided by advice given by international development agencies.

There is great variation in the drafting of dedicated climate change legislation on the continent. Kenya and Nigeria are the only two of the countries reviewed which have a specific climate change act in draft form. African countries are also at different stages of their fulfilment of obligations under the UNFCCC. Ethiopia is the only country (of those reviewed) which has developed a comprehensive NAPA, primarily because of its status as an LDC\(^\text{19}\). Nigeria and Egypt have submitted national climate change communications, describing the country’s level of adaptation and preparedness for climate change. Kenya has developed a national climate change response strategy, while Ethiopia has promulgated an economic development policy with a focus on green development.

The case countries are also at different stages of establishing climate change institutions; be they for co-ordination across various ministries, for promoting and approving CDM projects or for parliamentary oversight function. For Kenya and Nigeria, the climate change bill is linked to the establishment of such agencies: a National Clean Energy Development Mechanism Authority in Kenya and the Climate Change Commission in Nigeria. Egypt was the first of the cases to have established a CDM authority, in 2005 and has been able to benefit from international funding for approved projects. In Botswana the Meteorological Service Department was assigned the role of the DNA (Designated National Authority for CDM projects). The meteorological agencies have been active in most countries as the overseers of environmental data collection, also with respect to extreme weather events.

The climate change challenge for most African countries is closely coupled with developmental and environmental problems. Both mitigation and adaptation responsibilities therefore reside within a range of government departments, including those with a primary mandate for energy, environment, agricultural production, poverty eradication, or water management. This has resulted in a need for co-ordination of climate change initiatives across various government departments in all countries reviewed. The governments have duly responded with some or the other form of co-ordinating bodies or forums, with Kenya establishing a committee in 1992 and Botswana as the latest one, in 2010. Of the cases reviewed, Botswana was the only African example with a Parliamentary select committee for climate change.

With regards to non-government institutions, the Kenyan and Nigerian NGO sector was found to be most active and independent of the national government. There is also considerable presence of international agencies offering financial or technical assistance.

\(^{19}\) Tanzania also has a National Adaptation Program of Action (NAPA) developed for implementation.
The following tables summarise key information on the 5 African countries reviewed. Table 2.1 draws out the status and components of flagship climate change legislation. Table 2.2 highlights additional policies and acts, pertinent to climate change, the environment and developmental challenges in the countries. Table 2.3 distils information on relevant government structures for climate change, their institutional location and their roles, within the 5 African countries.

**Table 2.1 Status and components of flagship legislation in 5 African countries**

<table>
<thead>
<tr>
<th>Country</th>
<th>Flagship legislation</th>
<th>Status of legislation</th>
<th>Mechanisms or key elements of the legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya</td>
<td>Draft Climate Change Bill, 2010</td>
<td>Community engagement and input</td>
<td>Building regulations for lower emissions; Establishment of CDM authority</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Draft Climate Change Commission Bill</td>
<td>Awaiting Presidential assent</td>
<td>Co-ordination of agencies, ministries; develop national strategy for GHG reduction; Carbon market regulation; Finalise the 2nd National Communication under the UNFCCC</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>Draft National Climate Change Strategy</td>
<td>Funding and framing paper available from DfID</td>
<td>Mainstreaming CC into all development activities; leverage technical help and resources; rebalance investments</td>
</tr>
<tr>
<td>Botswana</td>
<td>Not in place or in draft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egypt</td>
<td>Not in place or in draft</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 2.2 Environment and development policies and acts in 5 African countries**

<table>
<thead>
<tr>
<th>Country</th>
<th>Pertinent policies</th>
<th>Environment and development policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya</td>
<td>National Climate Change Response Strategy</td>
<td>Forestry Development Plan First National Communications to the UNFCC Kenya’s Climate Change Needs and Needs Assessment Report under the UNFCCC</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Climate Change Policy and Response Strategy</td>
<td>First National Communications to the UNFCC Strategic Framework for Voluntary Nationally Appropriate Mitigation Action Several sectoral responses</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>Climate-resilient Green Economy Strategy</td>
<td>Plan for Accelerated and Sustainable Development to end Poverty (PASDEP1 and 2) First National Communications to the UNFCC Environmental policy of Ethiopia Agriculture and Rural Development Policy</td>
</tr>
<tr>
<td>Botswana</td>
<td>Technology Needs Assessment on Climate Change</td>
<td>First and Second National Communications to the UNFCC National Policy on Resources Conservation and Development Environmental Impact Assessment Act of 2005</td>
</tr>
<tr>
<td>Egypt</td>
<td>National Climate Change Action Plan</td>
<td>First and Second National Communications to the UNFCC National Environmental Law, amended by Law 9 of 2009</td>
</tr>
<tr>
<td>Country</td>
<td>Government structures</td>
<td>Location of structure</td>
</tr>
<tr>
<td>-------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Kenya</td>
<td>National Environment Management Authority</td>
<td>Overseen by the Ministry of Environment and Natural Resources</td>
</tr>
<tr>
<td></td>
<td>National Climate Change Activities Coordinating Committee</td>
<td>Ministry of Environment and Natural Resources (members from ministries, local councils, universities, private sector, NGOs)</td>
</tr>
<tr>
<td></td>
<td>Climate Change Coordination Unit</td>
<td>Office of Prime Minister</td>
</tr>
<tr>
<td></td>
<td>Parliamentary Network on Renewable Energy and Climate Change</td>
<td>Parliament</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Special Climate Change Unit</td>
<td>Federal Ministry of Environment</td>
</tr>
<tr>
<td></td>
<td>Inter-ministerial Coordinating Committee on Climate Change</td>
<td>Chairmanship of the Federal Ministry of Environment</td>
</tr>
<tr>
<td></td>
<td>Climate Change Commission (proposed)</td>
<td>Presidency</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>National Climate Change Forum</td>
<td>Ministry of Agriculture and Rural Development of Ethiopia</td>
</tr>
<tr>
<td>Botswana</td>
<td>National Climate Change Committee</td>
<td>Select Committee of the Parliament</td>
</tr>
<tr>
<td></td>
<td>National Climate Change Coordinator</td>
<td>Ministry of Environment, Wildlife and Tourism</td>
</tr>
<tr>
<td>Egypt</td>
<td>National Climate Change Committee</td>
<td>Chaired by Egyptian Environmental Affairs Agency</td>
</tr>
<tr>
<td></td>
<td>Egyptian Designated National Authority for the Clean Development Mechanism</td>
<td>CDM Council headed by the Minister of State for Environmental Affairs and the CDM Bureau by CEO, Egyptian Environmental Affairs Agency</td>
</tr>
</tbody>
</table>
3. Regional and inter-regional programmes on climate change in Africa

This part of the research document covers regional programmes in Africa which address climate change sometimes in collaboration with non-African, international developmental agencies.

3.1 Southern African programmes

This section introduces and provides further links to two regional programmes on climate change which are active in the Southern African region.

3.1.1 Southern African sub-regional framework on climate change

As part of a comprehensive framework of climate change programmes in Africa facilitated by the African Ministerial Conference on Environment (AMCEN), a stock-taking and gap analysis report of projects, decisions and initiatives focused on climate change activities in Southern Africa was prepared in February 2010. This is a very useful resource which covers intergovernmental and civil-society driven programmes; as well as national climate change programmes in 15 African countries. Information on the various programmes and initiatives includes specific details on programme funders and international development agencies involved. For further information on the above, please refer to the link: http://www.unep.org/roa/amcen/docs/AMCEN_Events/climate-change/southAfrica/SADC_Report.pdf

3.1.2 Southern African Regional Climate Change Programme (RCCP)

The RCCP (http://www.rccp.org.za/) aims to contribute to the achievement of Southern Africa’s climate change adaptation needs, socioeconomic development and poverty alleviation objectives, including the Millennium Development Goals. The countries covered under this programme are Angola, Botswana, DR Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

By synthesising the relevant climate change science, developing strategic research and strengthening science-policy-governance-finance dialogue, the RCCP will build an evidence base for appropriate trans-boundary responses, strengthen the region’s voice on international platforms and negotiations, and enhance its ability to equitably access the necessary finance for effective climate change adaptation. The programme has explored a number of likely climate scenarios for the region, and assessed the capacity of various role players to respond to these changing conditions. A significant problem in dealing with climate change in the southern Africa region is that of relevant information, which has also been addressed by this programme.

The British government’s DfID contracted OneWorld to develop a five-year programme aimed at mitigating the impact of climate change on vulnerable livelihoods in Southern Africa form 2007-2011. For more information on OneWorld and on the different phases of the RCCP programme, please refer to: http://www.oneworldgroup.co.za/projects/climate-change/southern-african-regional-climate-change-programme-rccp/

3.2 The African Union and Regional Economic Communities (REC) programmes

This section covers the various programmes and initiatives on climate change established within existing, trans-national economic alliances in Africa, often with support from non-African
governments or international donor agencies. It includes UNDP’s presence on the continent, in relation to climate change. A useful resource for environment and sustainable development negotiations, including climate change, and policy making in Africa is the Africa Regional Coverage (ARC) Project of the International Institute for Sustainable Development (http://africasd.iisd.org/). Launched in 2006, the ARC initiative works to improve the transparency of the region’s policy discussions on sustainable development and to raise their profile at the international level.

3.2.1 AU’s climate change focus
AU addresses climate change through its Environment and Natural Resources Department within the Rural Economy Division. The Committee on Industry, Science and Technology, Energy, Natural Resources and Environment is the AU organ charged with handling the climate change projects and programmes of the AU. For more information on the functions of the Environment and Natural Resources Department and the specialised technical committees, please refer to the following links: http://au.int/en/organisations/stc; http://au.int/en/dp/rea/; http://au.int/en/dp/rea/division/ENR

3.2.2 NEPAD’s Climate Change and Natural Resource Management Programme
NEPAD was adopted as a Programme of the AU in the Lusaka Summit in 2001. The Climate Change Programme within NEPAD works to bring together all relevant regional and continental players to co-ordinate, share knowledge and encourage one another in addressing the threat of climate change. The objective of the programme is to assist countries in integrating climate change responses into their national development processes. The programme aims to strengthen skills in adaptation, mitigation, technology and finance to combat environmental change. The programme focuses on environment, energy and water.

NEPAD’s Climate Change and Natural Resource Management programme plays a co-ordinating and advocacy role to promote regional and national programmes aimed at counteracting these environmental threats. NEPAD believes that addressing environmental issues is a pre-condition for its other goals of sustainable growth and development. For more information, refer to the programme’s website: http://www.nePAD.org/climatechangeandsustainabledevelopment

3.2.3 UNDP and Climate Change in Africa
With its presence in every African country and its extensive network of partners across the continent, UNDP provides services to help African countries and regional institutions to respond to climate change by working on the following four areas:

- Support the capacity of decision-makers in tackling climate change issues
- Help African countries adapt to climate change
- Assist in developing low-carbon development strategies
- Support the countries in minimising the impact of climate related disasters

3.2.4 The Programme on Climate Change Adaptation and Mitigation in the COMESA-EAC-SADC region

This is a five-year initiative that started in July 2010. The aim of the programme is to inject Africa’s Unified Position on Climate Change into the post-2012 United Nations Framework Convention on Climate Change (UNFCCC) global agreement so as to unlock resources for promoting strategic interventions that sustain productivity and livelihood improvement for millions of climate-vulnerable people in the region. The COMESA-EAC-SADC Climate Change initiative has been a success thanks to the funding by different cooperating partners; the major ones being Norway, and the European Union. As at the end of February 2012; the three RECs had made significant progress negotiating a grant from DfID for the implementation of Climate Smart agriculture within their share region of Eastern and Southern Africa.

3.2.5 COMESA’s Climate Change Initiative

The Secretariat for the Common Market for East and Southern Africa (COMESA) has independently developed a comprehensive approach and program initiative to address climate change within the context of its responsibilities and strategy for promotion of the Comprehensive Africa Agriculture Development Programme (CAADP). The Climate Initiative is divided in two parts, the first directed to Frameworks & Tools (for which funding is already secured), the second to Applications & Learning.

For more information on the COMESA Climate Initiative please refer to: http://programmes.comesa.int/index.php?option=com_content&view=article&id=80&Itemid=110

3.2.6 The East African Community Climate Change Policy (EACCCP)

The EACCCP was developed as a result of a directive by the Heads of State of the East African Community (EAC) Partner States, at their 11th Summit Meeting, which was held in Arusha, Tanzania on 20th November 2009 to address the adverse impacts of Climate Change in the region.

This is in response to the growing concern about the increasing threats of the negative Climate Change impacts to the development of set targets and goals in the region. In addition, it is a fulfilment of one of the objectives of the Community; to develop policies and programmes aimed at widening and deepening cooperation among Partner States. This Policy was prepared by experts drawn from each Partner State, the EAC Secretariat and Lake Victoria Basin Commission Secretariat. The preparation was guided by the emerging issues and challenges faced by the region in light of the increasing climate change impacts.

The impacts are especially on the key economic drivers such as water resources, agriculture, energy, transport, health, forestry, wildlife, land and infrastructure among others. It is also consistent with the provisions of the East African Treaty, the EAC Protocol on Environment and Natural Resources, the Protocol on Sustainable Development of Lake Victoria Basin as well as the UNFCCC.

3.2.7 ECOWAS climate change project
Five West African states launched a sub-regional project on adaptation to climate change in 2009. It was aimed at developing and piloting a range of effective mechanisms for reducing the impact of climate change induced by coastal erosion in vulnerable regions in the five participating countries of Gambia, Cape Verde, Guinea Bissau, Mauritania and Senegal. The project was funded by the Global Environment Facility (GEF) with counter funding from governments of the participating countries. In 2010, the German government promised to support ECOWAS with 100 million Euros for the establishment of a regional science centre to combat climate change. Member states have called for the development of an information and early warning system on climate change in order to reduce the vulnerability of various social groups in West Africa. For a discussion on the member states’ recommendations for ECOWAS, in collaboration with UNEP, refer to the following link: http://news.ecowas.int/presseshow.php?nb=010&lang=en&annee=2011

3.2.8 Assessment of climate change institutions in ECCAS
The UN International Strategy for Disaster Reduction Secretariat (UN/ISDR) has entered into an agreement with the Economic Community of Central African States (ECCAS) to strengthen collaboration on disaster risk reduction (DRR) and climate change adaptation. The two entities are expected to increase their cooperation on technical assistance for DRR, by developing and signing a data sharing protocol, and carrying out an assessment of key DRR and climate change adaptation institutions within ECCAS.

3.2.9 SADC REDD+ Network
The SADC REDD+ Network (http://www.sadc.int/REDD/) was created in 2010 in order to provide an information-sharing platform for REDD+ in the SADC region. The objective of the SADC REDD+ Network is to provide experts from governments, research institutes, NGOs and CSOs and other stakeholders in the SADC region with a comprehensive overview of REDD+ preparations and activities in the SADC region by creating a pool of information on specific REDD-related questions relevant to the region and beyond.

3.3 Initiatives on shared natural resources in Africa
This section lists regional initiatives and partnerships on shared natural resources on the African continent. These initiatives go beyond national boundaries and may require policy and legislative harmonisation among member countries’ governments.

3.3.1 The Congo Basin and Central African Forests
- CBFP: Congo Basin Forest Partnership (www.pfbc-cbfp.org/)
- COMIFAC: Commission of Central African Forests
- RAPAC: Protected Area Network in Central Africa (www.rapac.org/)
- OFAC: Observatory for the Forests of Central Africa (www.observatoire-comifac.net/?l=en)

21 http://www.africanews.com/site/ECOWAS_launches_climate_change_project/list_messages/24382
3.3.2 Lake Chad Basin
- LCBP: Lake Chad Basin Project (http://lakechad.iwlearn.org/)
- LCBC: Lake Chad Basin Commission was created in 1964 by the four countries bordering Lake Chad -- Cameroon, Chad, Niger, and Nigeria. They were joined in 1994 by the Central African Republic. The aims of the commission are to regulate and control the use of water and other natural resources in the basin and to initiate, promote, and coordinate natural resource development projects and research.

3.3.3 Nile River Basin
- NBI: Nile Basin Initiative (www.nilebasin.org/)
- River Basin Initiative (http://www.riverbasin.org/index.cfm; http://www.riverbasin.org/index.cfm?menuid=101&parentid=87): River Basin Initiative (RBI) Portal was developed to establish a global network to share information and lessons learned, as well as to link and support activities which use an integrated approach in managing our biodiversity, wetlands and river basins. The Nile Basin is one of the shared river basins featured in the RBI portal.

3.3.4 The KivuWatt project
The Lake Kivu project is an energy generation project, located on Lake Kivu, at Kibuye in Rwanda, and expected to be in service from 2012. The $140 million gas-extraction facility and power plant is set to significantly lower the cost of electricity necessary to drive Rwanda’s fast growing economy. For further information, refer to Lake Kivu’s official website: http://www.lakekivu.org/ and the Ministry of Infrastructure website for press releases on the project: http://mininfra.gov.rw

3.3.5 Lake Victoria Basin
- LVBC: Lake Victoria Basin Commission (www.lvbcom.org/) established by the EAC
- LBDA: Lake Basin Development Authority (http://www.lbda.co.ke/index.htm) established by the government of Kenya.
Appendix 1: Links to further reading
Below are links to further detail and information.

**Carbon Budget:** The UK government uses a macro carbon-management system called carbon budgeting: A 'carbon budget' is a cap on the total quantity of greenhouse gas emissions emitted in the UK over a specified time. Under a system of carbon budgets, every tonne of greenhouse gas emitted between now and 2050 will count. Where emissions rise in one sector, corresponding falls in another sector will have to be achieved.

**Green Allowance created in Brazil:** a payments-for-ecosystem services scheme aimed at combating extreme poverty while emphasizing conservation. Please refer to page 22 of the Second GLOBE Climate Change Study for more detail. Refer to the online article: [www.globalenvision.org/countries/brazil](http://www.globalenvision.org/countries/brazil)

**A new Energy Efficiency Directive in the EU:** has been proposed and is under discussion in the Council and the European Parliament. The directive is expected to be adopted in Spring 2012. For more information on the directive please refer to: [www.decc.gov.uk/en/content/cms/consultations/eceed/eceed.aspx](http://www.decc.gov.uk/en/content/cms/consultations/eceed/eceed.aspx) For latest news: [http://www.reuters.com/article/2012/03/15/eu-efficiency-idUSL5E8EDAJN20120315](http://www.reuters.com/article/2012/03/15/eu-efficiency-idUSL5E8EDAJN20120315)

**India’s National Solar Mission:** In addition to the National Solar Mission as part of the NAPCC, lots of projects are being implemented such as the Solar Photovoltaic Program, the Solar Water Heating System Program and the Village Electrification Program. [www.indg.in/rural.../remote-village-electrification-programme](http://www.indg.in/rural.../remote-village-electrification-programme)

**National Energy Committee, South Korea:** proposed that the nuclear energy portion of the national energy mix be increased from 36% in 2007 to 59% in 2030. Nuclear energy is seen as a clean source of energy. For a 2008 press release on S. Korea’s green growth plan, please see: [www.iea.org/papers/roundtable_slt/korea_oct08.pdf](http://www.iea.org/papers/roundtable_slt/korea_oct08.pdf). For more on the framework for Korea’s green growth legislation and a copy of the legislation, please refer to: [http://www.greengrowth.org/gg-initiative.asp](http://www.greengrowth.org/gg-initiative.asp)

**Interagency Commission of the Russian Federation on Climate Change Problems:** For more details on the institutional body please refer to the following link: [http://www.gcrio.org/CSP/pdf/russianfed_snap.pdf](http://www.gcrio.org/CSP/pdf/russianfed_snap.pdf) for a full list of the 21 ministries and agencies on page 15.

**National Taskforce for Energy and Water Efficiency, Indonesia:** established in 2008 through the Presidential Instruction No. 2/2008 – Regulation on Energy and Water Efficiency. More information is available on page 173 of the Second GLOBE Climate Change Study.

**Green Investment Bank, UK:** Home page for the Green Investment Bank web site which contains further links to several detailed documents: [http://www.bis.gov.uk/greeninvestmentbank](http://www.bis.gov.uk/greeninvestmentbank)

**Energy conservation and efficiency laws, Russia:** specific names of such laws are available on page 219 of the Second GLOBE Climate Change Study.

**Location and rationale of CC committees and their roles:** Presidential Committee on Green Growth, South Korea; National Council for Climate Change, Indonesia, chaired by the President; Advisory Council on Climate Change, India, chaired by the PM; and Inter-secretariat Commission on Climate Change, Mexico, created through a Presidential agreement. These should be investigated as part of the next research brief, as the current research mandate does not cover analysis of this nature.