

NATIONAL CLIMATE CHANGE ACTION PLAN



REPUBLIC OF KENYA

# **Best Practices for Mainstreaming Climate Change in National Planning Processes: Annotated Bibliography**

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## National Climate Change Action Plan

### Best Practices for Mainstreaming Climate Change in National Planning Processes:

### Annotated Bibliography

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## Abbreviations

ATAR	Adaptation Technical Analysis Report
DFID	Department for International Development
FAO	Food and Agriculture Organization of the United Nations
GIZ	Deutsche Gesellschaft für Technische Zusammenarbeit (German Agency for Development Cooperation)
LDC	least developed country
MEMR	Ministry of Environment and Mineral Resources
MPND	Ministry of State for Planning, National Development and Vision 2030
MTP2	Second Medium-Term Plan
NAMA	Nationally Appropriate Mitigation Action
NAPA	National Adaptation Programme of Action
NCCAP	National Climate Change Action Plan
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
REMA	Rwanda Environment Management Authority
SEA	strategic environmental assessment
SPCR	Strategic Program for Climate Resilience (Grenada)
REDD+	reducing emissions from deforestation and forest degradation plus the role of conservation, sustainable management of forests and enhancement of forest carbon stocks
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development

## 1.0 Introduction

The Government of Kenya released its *National Climate Change Action Plan* (NCCAP) in 2013.<sup>1</sup> This plan provides a prioritization of future plans and actions, building on the 2010 *National Climate Change Response Strategy* (Government of Kenya, 2010). Effective implementation of the plan will require coordinated and integrated action, including mainstreaming the plan in the Government of Kenya planning process at the national, county and sectoral levels.

The Government of Kenya takes climate change and its impact on development seriously. Climate change is considered a crosscutting issue that will be mainstreamed in the planning process both at the national and county levels and in all the sectors of the economy. The Medium-Term Plan (2013-17) provides a singular opportunity to incorporate climate change programmes into the national development plans. The second Medium-Term Plan (MTP2) will build on both the *National Climate Change Response Strategy* and its Action Plan to incorporate climate change programmes and projects in the next planning cycle (2013-17).

Kenya's approach includes mainstreaming both adaptation and mitigation considerations across the planning process. This annotated bibliography aims to assist this mainstreaming process by identifying best practices and useful guidance documents.

## 2.0 Literature Review

Climate change mainstreaming (also referred to as climate proofing) is not uniformly defined in the literature (Lebel *et al.*, 2012); and processes and guidance mainly focus on adaptation or encouraging climate resilient development and reducing vulnerability to climate change. For the purposes of this bibliography, the definition of the United Nations Development Programme (UNDP) and United Nations Environment Programme (UNEP) is modified to include mitigation, whereby mainstreaming is "the iterative process of integrating considerations of climate change [mitigation and] adaptation into policy-making, budgeting, implementation and monitoring processes at national, sector and subnational levels" (UNDP and UNEP, 2011).

Twenty-eight documents are included in this annotated bibliography. Most of the mainstreaming literature focuses on building climate resilience, reflecting the fact that adaptation mainstreaming has taken place for several years in national planning and official development aid (ODA) processes. Much of the guidance is directed toward development cooperation processes, or climate proofing and mainstreaming adaptation in programs and projects funded through ODA programmes. The Organisation for Economic Co-operation and Development (OECD 2009, 2010) and EuropeAid (2009) are good examples of how to mainstream climate change in development programs. These documents provide important information on best practices, lessons learned and challenges; as well as approaches to mainstreaming that can inform Kenyan planners.

A more focused approach to mainstreaming in developing country planning process can be found in UNDP and UNEP (2011) and Secretariat of the Pacific Community and Deutsche Gesellschaft für Technische Zusammenarbeit (GIZ) (2010). These documents are especially

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<sup>1</sup> All reports and analyses developed as part of the Action Plan process are available at: <http://www.kccap.info/>.

useful for Kenyan planners, as they provide context and lessons from experience in developing countries.

The theory, as well as the challenges, of mainstreaming, is taken up by Mitchell *et al.* (2009) and Lebel *et al.* (2012). A more practical focus is taken in the guidance documents by Huxtable (2009) and Module 6 of Global Climate Change Alliance Support Facility (2012). Hay *et al.* (2005) provide a useful guide for mainstreaming adaptation in a country's national planning process, using as examples the national development plans of the Federated States of Micronesia and Cook Islands. This is a potentially useful guidance document for Kenya, providing a pragmatic approach to begin taking *Kenya's Climate Change Action Plan* across the planning process.

Effort has been made to identify documents that include information on incorporating mitigation considerations in environmental impact assessments or strategic environment assessments (SEAs), to provide context for and examples of mainstreaming of mitigation, such as the by the Canadian Environmental Assessment Agency (2003) and DFID (2003). The Energy research Centre of the Netherlands' *Paving the Way for Low-Carbon Development Strategies* provides a useful overview of the building blocks for successful low carbon development strategies, as well as lessons learned and best practices based on case studies in Ghana and Indonesia.

In terms of scale, most attention has been given to national-level initiatives (see for example IISD, 2012). At the sectoral level, mainstreaming adaptation (and to a slightly lesser extent, mitigation) in the agricultural sector is also prominent. Smit and Bockel (2009) and the World Bank (2010) provide an analysis of mainstreaming in the agricultural sector.

### 3.0 Mainstreaming Climate Change: Lessons from the Literature

Several recurring lessons for successful mainstreaming are identified in the literature. These lessons are included in Table 1 below, which also includes the steps that have been taken by the Government of Kenya in the development of the climate change action plan. The Kenyan process is following best practices and has completed much of the groundwork needed for successful mainstreaming.

**Table 1: Lessons for successful mainstreaming and steps taken by the Government of Kenya**

Lessons for successful mainstreaming	Steps taken by the Government of Kenya
<ol style="list-style-type: none"> <li>1. Use comprehensive and up-to-date socioeconomic, geographic and climatological information for assessing risks and vulnerabilities.</li> </ol>	<ul style="list-style-type: none"> <li>- The NCCAP includes the Adaptation Technical Analysis Report (ATAR) that provides up-to-date technical information and evidence for the preparation of the National Adaptation Plan. This includes a review of the current socioeconomic, geographic and climatological information for assessing risks and vulnerabilities.</li> <li>- The action plan also includes a Low-carbon Scenario Analysis that builds on a comprehensive assessment of mitigation opportunities in six sectors.</li> </ul>

<p>2. Identify mitigation and adaptation priorities through an inclusive stakeholder consultation process, in order to increase ownership and buy-in.</p>	<ul style="list-style-type: none"> <li>- The action plan process was an inclusive yearlong process that engaged stakeholders at the national and county levels.</li> <li>- The mitigation analysis brought together experts from government, the private sector, academia and civil society organization in six sectors.</li> <li>- The adaptation analysis team consulted with research, academic, private sector, civil society and government institutions, and individuals. Formal consultations were undertaken involving people from the 47 counties.</li> </ul>
<p>3. Identify mainstreaming “champions” at senior levels of government to help maintain interest and momentum.</p>	<ul style="list-style-type: none"> <li>- The Permanent Secretary, Ministry of Environment and Mineral Resources (MEMR), has spearheaded the action plan process, and is committed to mainstreaming as an important element of implementation.</li> <li>- The Permanent Secretary, Ministry of State of Planning, National Development and Vision 2030 (MPND) is committed to mainstreaming climate change in the MTP2, county and sectoral plans.</li> <li>- The Permanent Secretary, Ministry of Energy, has supported action in the energy sector, including the development of a geothermal NAMA.</li> </ul>
<p>4. Use cost-benefit analysis and other tools to assess priority mitigation and adaptation measures.</p>	<ul style="list-style-type: none"> <li>- The low-carbon assessment used scenario analysis to identify potential priority mitigation options.</li> <li>- The ATAR used a climate risk assessment framework to identify potential priority actions.</li> <li>- Both analyses were ground-truthed, informed and approved by Kenyan experts, who identified priority actions.</li> <li>- Kenya has undertaken a high-level climate risk screening of its Vision 2030 flagship projects, and an in-depth screening of the five flagship projects considered most vulnerable to climate change.</li> </ul>
<p>5. Build upon existing programs, processes and institutions (such as disaster risk reduction measures) in order to increase familiarity and recognition of the importance of mainstreaming</p>	<ul style="list-style-type: none"> <li>- The climate change action plan process worked closely with sectoral ministries, who are taking up actions. For example, the Ministry of Energy is taking action on geothermal, and the Ministry of Agriculture is identifying nationally appropriate mitigation actions (NAMAs).</li> </ul>
<p>6. Frame mainstreaming as a crosscutting issue, rather than a sectoral environmental program</p>	<ul style="list-style-type: none"> <li>- The MPND considers climate change as a crosscutting issue in its planning process.</li> </ul>
<p>7. Actively monitor results and, when possible, use mainstreaming approaches that can incorporate new knowledge and experiences</p>	<ul style="list-style-type: none"> <li>- The action plan includes the development of a National Performance and Benefit Measurement Framework, an integrated framework for measuring, monitoring, evaluating, verifying and reporting results of mitigation actions, adaptation actions and the synergies between them.</li> </ul>

## 4.0 Research and Information Gaps

A growing literature exists on mainstreaming, but research and information gaps remain. Most prominent among these is the relative scarcity of guidelines on integrating mitigation and adaptation concerns for any given scale (the literature on mainstreaming mitigation and

adaptation in the agricultural sector is a notable exception). More generally, mitigation mainstreaming has been given much less prominence than adaptation in the literature, reflecting that many developing countries have low levels of greenhouse gas emissions and are more concerned with building climate resilience. Mitigation considerations tend to be addressed through environment impact assessments or SEA in developed countries, suggesting a need for work to adjust these tools for use in developing countries.

Additional case studies could also deepen insights on regional priorities for mainstreaming. For example, what are the most pressing climatic, socioeconomic and institutional issues facing climate change mainstreaming initiatives in Sub-Saharan Africa, versus those of Southeast Asia? Further guidance on mainstreaming adaptation and mitigation initiatives at the subnational levels is also required. Finally, much more research is required to extract on the ground lessons from on-going mainstreaming efforts, including the political dynamics of how the mainstreaming process is negotiated and implemented – especially for cases of integrated mitigation and adaptation efforts.

Adaptation and mitigation tend to be addressed separately in the literature, continuing the separate pillar approach to addressing climate change. Kenya's focus on low-carbon climate resilient development – addressing adaptation and mitigation in an integrated manner – appears to be a unique approach that will offer lessons.

## **5.0 Annotated Bibliography**

The entries in the annotated bibliography are organized by scale (national, subnational) and then sector to help the reader focus in needed information. Within each of these sectors, the entries are further categorized by the type of mainstreaming activity (mitigation, adaptation, or integrated adaptation and mitigation).

### **5.1 National-level Mainstreaming**

#### ***Integrated Mitigation and Adaptation***

**EuropeAid. 2009. *Guidelines on the Integration of Environment and Climate Change in Development Cooperation*. Brussels: European Commission.**

**Available at:**

**[http://ec.europa.eu/europeaid/infopoint/publications/europeaid/172a\\_en.htm](http://ec.europa.eu/europeaid/infopoint/publications/europeaid/172a_en.htm)**

This guide contains helpful lessons for mainstreaming environmental concerns in development programming, including climate change mitigation and adaptation at the national, sectoral and project level. The first two chapters address the importance of the environment and climate resilience to sustainable development and poverty alleviation, and the concept of environmental and climate mainstreaming. The document then discusses environmental and climate change mainstreaming in the programming phase, SEAs and entry points for environmental mainstreaming in country strategy papers. The subsequent chapters discuss how to use aid delivery as an instrument for environmental and climate change mainstreaming, and for comprehensive SEAs – including sector policy support programmes (such as for agriculture), general budget support for national development strategies (such as national poverty alleviation strategies), as well as at the project level. The guide includes a screening tool for SEAs, integrating the environment into a logical framework approach, incorporating climate risk adaptation measures in project formulation,



quick win opportunities for mitigating and adapting to climate change which also generate net economic benefits, as well as advice on integrating environment and climate change in project feasibility and pre-feasibility studies.

**Global Climate Change Alliance Support Facility. 2011. *Africa Workshops*.**

**Available at:** [http://archive.gcca.eu/pages/63\\_2-Africa-Workshops.html](http://archive.gcca.eu/pages/63_2-Africa-Workshops.html).

This website covers the presentations made at climate change mainstreaming workshops organized by the Global Climate Change Alliance and held in Senegal for West African countries (13<sup>th</sup> and 15<sup>th</sup> December 2011), Nairobi for East African countries (November 15<sup>th</sup> and 17<sup>th</sup> 2011), and Lesotho (October 25<sup>th</sup> to 28<sup>th</sup> 2011) for Central and South African countries, respectively. Presentation topics included economic challenges of climate change planning in Tanzania, climate-proofing national planning processes, and Kenya's experience on the relationship between climate change finance and development effectiveness. Additionally, the site hosts the 10 training modules on climate change mainstreaming distributed to workshop participants, addressing the topics of: 1) climate change development linkages; 2) mainstreaming climate change and strengthening institutions and capacities; 3) the fundamentals of climate change science; 4) understanding and planning under uncertainty; 5) raising awareness and building partnerships; 6) mainstreaming climate change in national, sector and sub-national policies, strategies and programmes; 7) costing, assessing and selecting adaptation and mitigation options and measures; 8) mainstreaming climate change in the budgetary process; 9) mainstreaming climate change in monitoring systems; 10) a final summary and synthesis chapter. The website is a comprehensive source on climate change mainstreaming in Sub-Saharan Africa.

## ***Mitigation***

**The Federal-Provincial-Territorial Committee on Climate Change and Environmental Assessment. 2003. *Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners*. Gatineau: Canadian Environmental Assessment Agency.**

**Available at:** [http://www.ceaa-acee.gc.ca/A41F45C5-1A79-44FA-9091-D251EEE18322/Incorporating\\_Climate\\_Change\\_Considerations\\_in\\_Environmental\\_Assessment.pdf](http://www.ceaa-acee.gc.ca/A41F45C5-1A79-44FA-9091-D251EEE18322/Incorporating_Climate_Change_Considerations_in_Environmental_Assessment.pdf)

This document provides guidance on assessing the greenhouse gas implications of projects, including conducting a preliminary scoping of greenhouse gas considerations, identifying the emissions profile of the project's industry class (for example, manufacturing, oil and gas) and the estimated emissions of the specific project, quantifying direct and indirect emissions and their effects on emissions sinks, implementing an emissions management program, followed by monitoring and adopting an adaptive management framework in order to improve practices and take remedial actions where necessary. While focused at the project level in a developed country context, the guide provides useful worksheets for assessing the greenhouse gas emission impacts of projects that are practical for mainstreaming mitigation considerations at any scale.

**van Tilburg, Xander, Laura Würtenberger, Heleen de Coninck, Stefan Bakker. 2011. *Paving the Way for Low-Carbon Development Strategies*. Amsterdam: Energy Research Centre of the Netherlands. Available at:** <http://www.ecn.nl/docs/library/report/2011/e11059.pdf>

This document's focus on mainstreaming climate change mitigation (via low-carbon development strategies) makes it a fairly unique contribution to the literature. Section 5 (Lessons learned and discussion) contains an insightful examination of major challenges in the development of low-carbon development strategies, both at the readiness stage and as an on-going process, based work on low-carbon development strategies in Ghana and Indonesia. The authors highlight problems of government coordination – *inter alia*, lack of clear roles and policy mandates among government ministries and committees, lack of coordination among ministries, difficulty in ensuring ownership of low-carbon development strategies in ministries not traditionally implicated in climate change initiatives (for example, agriculture or energy), low stakeholder involvement from the outset of the process, and misalignment of the technical and political processes – as crucial impediments to ownership, implementation and iterative development of an effective low-carbon development strategy. This document will be of particular interest to countries interested in mainstreaming climate change mitigation alongside adaptation.

### **Adaptation**

**Dalrymple, Sandra Prescod, and Sarah Mason-Case. 2012. “Strengthening climate resilience: the case of Grenada.” *Inside Stories on Climate Compatible Development*. London: Climate and Development Knowledge Network.**

**Available at: <http://cdkn.org/wp-content/uploads/2012/06/Grenada-Inside-Story-6pp-final-low-res1.pdf>.**

This briefing note describes action taken on Grenada's Strategic Program for Climate Resilience (SPCR). Grenada had been making progress on addressing climate-related risks over the past twenty years, but that this was typically accomplished in an uncoordinated and piecemeal fashion due to lack of human and financial resources. The SPCR was formulated through a comprehensive and inclusive stakeholder consultation process. It is coordinated by a dedicated Project Coordination Unit housed in the Ministry of Finance, Planning, Economy, Energy and Cooperatives, which oversees all implementation, monitoring and reporting activities. The SPCR is strongly oriented toward development and climate resilience, rather than mitigation (or low-carbon development). Key lessons identified for effective mainstreaming include: tailoring climate change responses to fit local circumstances, adopting a comprehensive approach for embedding climate resilience, adopting a cross-sectoral and participatory policy design and implementation framework, and harmonizing activities with regional development programming. Challenges identified included attracting external finance, conflicts over how to finalize the SPCR among different Ministries, and criticisms from civil society that the SPCR vests too much responsibility for implementation with government ministries, rather than local communities and community based-organizations. This is a useful document for understanding the dynamics of the mainstreaming process.

**Hay, Jon, Richard Warrick, Chris Cheatham, Teresa Manarangi-Trott, Joseph Konno, and Peter Hartley. 2005. *Climate Proofing: A risk-based approach to adaptation*. Asian Development Bank Pacific Studies Series. Manila: Asian Development Bank. Accessed at:**

**<http://www.adb.org/sites/default/files/pub/2005/climate-proofing.pdf>**

The document includes case studies on climate proofing at several scales – from a road-building infrastructure project, to community development adaptation efforts, to national

development strategies – in the Cook Islands and Federated States of Micronesia. Key lessons include: the importance of adopting a risk-based approach because of the need for climate proofing across sectors (water, health, agriculture), its familiarity to planners, and amenability to quantitative analysis; the need to integrate top-down and bottom-up approaches to adaptation; and the usefulness of decision support tools, which enable comparability of adaptation measures.

**Huq, Saleemul, Atiq Rahman, Mama Konate, Youba Sokona and Hannah Reid. 2003. *Mainstreaming Adaptation to Climate Change in Least Developed Countries (LDCs)*. London: International Institute for Environment and Development. Available at:**

**[http://www.pacificdisaster.net/pdnadmin/data/original/IIED\\_2003\\_Mainstreaming\\_adaption.pdf](http://www.pacificdisaster.net/pdnadmin/data/original/IIED_2003_Mainstreaming_adaption.pdf).**

This early document advising least developed countries (LDCs) on best practices in climate mainstreaming for preparing their National Adaptation Programmes of Action (NAPAs) contains important general lessons. Key messages include: the need to translate technical scientific research into a language and time horizon that is meaningful for policymakers and the general public; the necessity of supporting in-country research on climate change impacts in order to make informed policy and program decisions; the importance of targeting sectoral planners and managers who are most likely to mainstream adaptation into their planning and programs; the necessity of informing senior policymakers for fostering high-level buy-in; the importance of having local and international experts disseminate the results of their research to practitioners; the need for awareness-raising in both government and civil society; and the importance of mainstreaming adaptation into all national and sectoral development initiatives.

**King, Peter N. 2010. *Mainstreaming Climate Change: A guidance manual for the Pacific Islands Countries and Territories*. Prepared for the Secretariat of the Pacific Regional Environment Programme 2010. Apia: Secretariat of the Pacific Regional Environment Programme. Available at:**

**[http://www.sprep.org/attachments/Climate\\_Change/1st\\_MPR\\_PACC\\_Mainstreaming\\_Guide.pdf](http://www.sprep.org/attachments/Climate_Change/1st_MPR_PACC_Mainstreaming_Guide.pdf)**

This report serves as a mainstreaming guide for governments in the Pacific Island States, aiming to facilitate climate change embedding in national development, policy and planning processes. It provides an overview of experience gained on mainstreaming climate change in the Pacific Region's development planning (very little), experience from other countries, and suggestions for bolstering the mainstreaming process in light of this lack of experience. The document's principal lessons are the need for clear communication of the importance of climate mainstreaming to senior government officials; that there is still no ideal formula for climate mainstreaming and additional learning-by-doing is required; the need for dialogue and clarification among government officials on the scope of mainstreaming, and the importance of building capacity for a variety of climate mainstreaming tools.

**Lebel, Louis, Lailai Li, Chayanis Krittasudthacheewa, Muanpong Juntopas, Tatirose Vijitpan, Tomoharu Uchiyama, and Dusita Krawanchid. 2012. *Mainstreaming climate change adaptation into development planning*. Bangkok: Adaptation Knowledge Platform and Stockholm Environment Institute. Available at:**

[http://www.climateadapt.asia/upload/publications/files/4f66f3868a813Mainstreaming climate change-v6 for Web.pdf](http://www.climateadapt.asia/upload/publications/files/4f66f3868a813Mainstreaming%20climate%20change-v6%20for%20Web.pdf)

Expanding on a regional forum hosted by the Adaptation Knowledge Platform in Bangkok, this short guide addresses adaptation mainstreaming at multiple scales: national (via poverty reduction and national development plans), sectoral (disaster risk reduction and natural resources management), and subnational (urban and local area-based planning). Key lessons and recommendations include: strengthening national capacity to use climate information (especially observation networks and climate risk assessments); enabling locally appropriate responses by harnessing local insight and knowledge; screening for climate risks; assessing risks and adaptation options; the need to strategically allocate funds and coordinate action by building on existing policies, programs and policies; the need to shift responsibilities for mainstreaming from environment to planning and development departments; the need to actively manage policy conflicts; the importance of learning from projects while recognizing their limitations (both in terms of scales and time horizons); and the need to monitor results and adopt a flexible and adaptive management framework to learn from on-going experience.

**Lofts, Katherine, and Alex Kenny. 2012. “Mainstreaming climate resilience into Government: The Philippines’ Climate Change Act.” *Inside Stories on Climate Compatible Development*. London: Climate Development Knowledge Network. Available at: [http://cdkn.org/wp-content/uploads/2012/07/Philippines-InsideStory\\_6pp WEB1.pdf](http://cdkn.org/wp-content/uploads/2012/07/Philippines-InsideStory_6pp_WEB1.pdf).**

This brief describes the development of the Philippines’ National Climate Change Action Plan, which was released in November 2011. Developed in consultation with civil society, academia and other stakeholders, the plan is oriented towards initiatives that bring multiple mitigation, adaptation and development benefits, and addresses seven priority areas for increasing climate resilience in the Filipino economy and society. The authors caution that the government is only beginning to implement its action plan, and consequently the most important lessons are likely to be learned in several years’ time. Nonetheless, the authors do identify early lessons that can be drawn from the process, such as: the importance of centralized coordination, monitoring and evaluation for climate mainstreaming; in countries where corruption is a persistent problem, regular reporting to the executive and legislative branches, as well as independent third party monitoring and evaluation should be implemented; devolution of planning and implementation to local levels; allowing developing countries to draw on multiple sources of bilateral and multilateral funding for mainstreaming; integrating social, economic, and environmental goals in the planning process, with indicators for monitoring results; and making judicious use of development assistance, by attempting to access grants rather than loans to finance adaptation initiatives. This is another strong document for understanding the political dynamics of on-the-ground climate mainstreaming.

**Mitchell, Tom, Thomas Tanner, and Emily Wilkinson. 2009. *Overcoming the Barriers. Mainstreaming Climate Change Adaptation in Developing Countries*. Tearfund Climate Change Briefing Paper 1. Brighton: Institute for Development Studies. Available at: <http://www.tearfund.org/webdocs/website/Campaigning/Policy%20and%20research/Overcoming%20the%20barriers%20briefing%20paper.pdf>**

This paper examines developing country government and donor agency actions on mainstreaming climate adaptation into development planning initiatives, identifies current challenges and shortcomings, and discusses some possible solutions. The report provides recommendations for mainstreaming along the themes of information, institutions, inclusion (of stakeholders and vulnerable populations), incentives, and international development finance. Key messages include the need to assess climate risk information against national development priorities, the importance of mainstreaming adaptation into current poverty reduction and risk reduction initiatives where feasible, and the necessity of using ground-level experience to inform adaptation measures. A discussion of progress made in mainstreaming adaptation into Caribbean and Pacific Island country initiatives is included.

**Organisation for Economic Co-operation and Development. *Integrating Climate Change Adaptation into Development Co-operation: Policy guidance.* 2009. Paris: OECD. Available at: <http://www.oecd.org/dac/43652123.pdf>**

This guide is meant to provide policymakers and practitioners in international development agencies with state of the art advice on mainstreaming climate change into development activities. The report provides a discussion of important challenges alongside key recommendations for mainstreaming adaptation at the national, sectoral, project and local levels. It also provides an appendix of tools and screening approaches for climate change adaptation efforts. This is the most comprehensive guide on climate mainstreaming in ODA programs identified in the literature review.

**Organisation for Economic Co-operation and Development. 2010. *Integrating Climate Change Adaptation into Development Co-operation: A User Guide for Practitioners Working at the National Level.* Paris: OECD. Available at: <http://www.oecd.org/dac/environmentanddevelopment/46664674.pdf>**

Similar to OECD, 2009, this adaptation mainstreaming guide focuses on integrating climate change in programmes funded through ODA. For the recipient country's national policy planning process, recommendations on mainstreaming are given for the national policy cycle (for example, identifying key actors and information), the national policy formulation stage, national-level planning, and national resource allocation. The discussion of mainstreaming adaptation into development aid emphasizes the importance of the principles of the Paris Declaration on Aid Effectiveness (ownership, alignment, harmonisation, mutual accountability, and managing for results) as key to promoting successful adaptation measures through aid. Budget support, country assistance strategies and joint assistance strategies are the identified measures for assisting national-level mainstreaming for adaptation. The document is an important guide for countries seeking ODA for their adaptation mainstreaming measures.

**Parry, Jo-Ellen, and Susan Taylor. 2012. *Mainstreaming Adaptation to Climate Change into National Policy: An overview for adaptation practitioners.* Pre-publication copy. Winnipeg: International Institute for Sustainable Development.**

The paper provides an overview of mainstreaming climate change adaptation into national planning, providing case studies from both developed (Canada and the Netherlands) and developing country (Cook Islands and Bangladesh). Key lessons extracted from the case

studies and accompanying literature review include: the importance of generating new knowledge and harmonizing existing information for identifying key risks and priority actions to address them; engaging senior Government officials to help ensure effectiveness; the critical importance of central-level and interdepartmental coordination mechanisms, backed by a senior ministry, for effective mainstreaming; building on existing structures such as disaster risk management as an important means of ensuring project success; emphasizing near and long-term benefits for facilitating buy-in; the usefulness of capitalizing on significant events such as extreme weather or natural disasters for promoting adaptation mainstreaming; and the importance of patience and taking a long-term view in mainstreaming processes, which may only be fully embraced after several years' time.

**Secretariat of the Pacific Community and Deutsche Gesellschaft für Technische Zusammenarbeit (GIZ). 2010. *Mainstreaming Processes for Climate Change Adaptation: Collection of best practices*. Secretariat of the Pacific Community and Deutsche Gesellschaft für Technische Zusammenarbeit GmbH Programme on Adaptation to Climate Change in the Pacific Island Region. Suva: Secretariat of the Pacific Community. Available at: [http://www.sprep.org/att/irc/ecopies/pacific\\_region/678.pdf](http://www.sprep.org/att/irc/ecopies/pacific_region/678.pdf)**

This comprehensive guide to mainstreaming adaptation includes examples of adaptation mainstreaming best practices from 15 developing countries, with actions classified according to five different “sectors”: national planning and institutions; institutional arrangements; sectoral mainstreaming; project-level mainstreaming; and information learning. A list of 15 adaptation tools is provided – five for mainstreaming adaptation within development institutions, five at the project or community-level, and five mainstreaming information tools.

**UNDP and UNEP. 2011. *Mainstreaming Climate Change Adaptation into Development Planning: A guide for practitioners*. Nairobi: UNDP and UNEP. Available at: <http://www.unep.org/pdf/mainstreaming-cc-adaptation-web.pdf>**

This useful handbook provides guidance on how to mainstream adaptation into the overall planning process. The guide takes a comprehensive approach, and provides chapters on: explaining the mainstreaming concept; the principal components of the mainstreaming process; identifying points of entry at multiple scales (for example, national poverty reduction strategies, development plans for districts or municipalities) and making the case for mainstreaming; methods for mainstreaming adaptation into policy processes (such as impact, vulnerability and adaptation assessments, cost-benefit analysis, and “climate-proofing” policy measures); and challenges to implementation (the need for enhanced monitoring and reporting, budgeting and finance issues, implementation at multiple scales, as well as capacity building and institutional strengthening).

## **5.2 Mainstreaming at the Subnational Level**

### ***Adaptation***

**Huxtable, Josie, and Nguyen Thi Yen. 2009. *Mainstreaming Climate Change Adaptation: A Practitioner's Handbook*. Hanoi: CARE International in Vietnam. Available at:**

[http://www.careclimatechange.org/files/adaptation/CARE\\_VN\\_Mainstreaming\\_Handbook.pdf](http://www.careclimatechange.org/files/adaptation/CARE_VN_Mainstreaming_Handbook.pdf)

This handbook was devised to aid CARE Vietnam and other development non-governmental organizations operating at the district and community levels to mainstream climate change resilience into their programmes and activities. Identifies a seven step process for mainstreaming climate change, consisting of: 1) assessing project activities for climate risk; 2) deciding whether to follow the Community Vulnerability Analysis Pathway; 3) identifying adaptation options; 4) prioritising adaptation measures; 5) selecting adaptation options for implementation; 6) implementing the adaptation options; and 7) evaluating the adaptation and the Climate Vulnerability Analysis Pathway. It also provides a set of tools for implementing these tasks, including a climate risk assessment tool, a priority adaptation matrix, and a stakeholder workshop methodology. This handbook is of particular importance for climate change mainstreaming at the county and community levels.

**Marseille, France. 2009. Planning Climate Resilient Cities: Early Lessons from Early Adapters. Paper prepared for the World Bank, 5<sup>th</sup> Urban Research Symposium, Cities and Climate Change, Marseille, France, 2009. Available at:** <http://siteresources.worldbank.org/INTURBANDEVELOPMENT/Resources/336387-1256566800920/6505269-1268260567624/Carmin.pdf>

This paper identifies good practices in climate change adaptation undertaken by two cities – Durban, South Africa and Quito, Ecuador – and also attempts to identify the drivers of their adaptation initiatives. Key lessons include the need to link adaptation to existing local development initiatives, the importance of sharing access to high-quality information on climate change risks and impacts, the necessity of fostering opportunities for knowledge exchange through local, regional, national and international networks, seminars, and conferences, and the establishment of a dedicated, well-staffed and well-funded climate change team, with ample authority to enlist the assistance of mid and high-level staff.

### **5.3 Sectoral Mainstreaming**

#### ***Integrated Adaptation and Mitigation***

**Rwanda Environment Management Authority (REMA). 2011. Guidelines for Mainstreaming Climate Change Adaptation and Mitigation in the Agricultural Sector. Kigali: REMA. Available at:** [http://www.rema.gov.rw/rema\\_doc/IMCE\\_Doc/Guidelines%20-Agriculture.pdf](http://www.rema.gov.rw/rema_doc/IMCE_Doc/Guidelines%20-Agriculture.pdf)

This guide is one of the few included in this review that consists of advice explicitly targeted towards a specific developing country government or sector. The document begins with an overview of vulnerabilities facing Rwanda's agricultural sector from climate change and variability. This is followed by a discussion of ongoing adaptation efforts made by the Government of Rwanda for the agricultural sector, including a discussion of institutional and thematic entry points for climate mainstreaming in the agricultural sector, along with a matrix analysing climate change risks in the Government's ongoing agricultural development strategies, and possible strategies for minimizing these risks. It offers a set of step by step tools for adaptation mainstreaming in a chosen project, such as climate vulnerability assessments, a matrix for determining whether to commit to additional stages of a climate vulnerability assessment, identifying adaptation measures (through, for example, the

resource table on best-practice community-based adaptation experiences), prioritizing adaptation measures (through a priority adaptation matrix), implementing the adaptation measures, and evaluating the impact of these measures (via, the “evaluating adaptation” checklist), each of which is illuminated through case studies and examples. The document ends with a discussion of challenges for mainstreaming adaptation in the agricultural sector, and key recommendations in moving forward.

**Rwanda Environment Management Authority. 2011. *Guidelines for Mainstreaming Climate Change Adaptation and Mitigation in the Energy and Infrastructure Sector*. Kigali: REMA. Available at:**

**[http://www.rema.gov.rw/rema\\_doc/IMCE\\_Doc/Guidelines-Energy&Infrastructure.pdf](http://www.rema.gov.rw/rema_doc/IMCE_Doc/Guidelines-Energy&Infrastructure.pdf)**

This document begins with an overview of vulnerabilities facing Rwanda’s energy and infrastructure sector (divided into energy, transport, housing and urbanism, water supply and sanitation services sub-sectors respectively) from climate change and variability. The document subsequently discusses institutional and thematic entry points for climate mainstreaming in the energy and infrastructure sector. It then examines guidelines and tools for mainstreaming in these sectors. Beginning with a discussion of vulnerability assessment, it highlights the need for improved information and recommends creating a “clearinghouse” of information on transport and climate change, and updating the National Flood Insurance Program’s flood insurance rate maps to account for future climate risks. It then briefly discusses tools and entry-points for mainstreaming climate change at the national, sectoral, project and local levels. The document concludes by discussing key barriers to mainstreaming adaptation in the energy and infrastructure sector, and provides a set of key recommendations for future action.

**Rwanda Environment Management Authority. 2011. *Guidelines for Mainstreaming Climate Change Adaptation and Mitigation in the Health Sector*. Kigali: REMA. Available at:**

**<http://www.eldis.org/go/display&type=Document&id=61816>**

Similar to the companion document described above, this document begins with an overview of vulnerabilities facing Rwanda’s health sector from climate change and variability. This is followed by a discussion of ongoing adaptation efforts made by the Government of Rwanda for the health sector (such as provision of water treatment kits), along with a matrix analysing potential climate change impacts on key health indicators. The document subsequently discusses institutional and thematic (such as water use efficiency) entry points for climate mainstreaming in the health sector. The guide also provides an overview of basic steps and tools for climate change mainstreaming in the health sector, namely: climate change impact and vulnerability assessment; identifying and analyzing mitigation and adaptation options (a matrix is provided for key criteria such as cost, ease of implementation, and institutional capacity); identifying and costing programs for mitigation and adaptation interventions; and designing and implementing a mainstreaming plan for the health sector (including two matrices – one on priorities for adaptation, the other on key milestones and institutional responsibilities); monitoring the implementation process, followed by performance evaluation. The document concludes by discussing obstacles to mainstreaming adaptation in the health sector, and provides a set of key recommendations in moving forward.



**Smit, Barry, and Louis Bockel. 2009. *Climate Change and Agriculture Policies. How to mainstream climate change adaptation and mitigation into agriculture policies? Advanced Draft of Policy Guidelines*. Rome: FAO.**

Available at:

[http://www.fao.org/fileadmin/templates/ex\\_act/pdf/Climate\\_change\\_and\\_agriculture\\_policies\\_EN.pdf](http://www.fao.org/fileadmin/templates/ex_act/pdf/Climate_change_and_agriculture_policies_EN.pdf)

This document is a comprehensive investigation on mainstreaming mitigation and adaptation in the agricultural sector. The policy guide begins with a discussion of the interrelationships between agriculture, food security, climate change mitigation and adaptation. It then moves on to discuss adaptation options for agriculture (such as soil conservation and land management, irrigation and water resource management) and synergistic options for integrating agricultural mitigation and adaptation (such as conservation agriculture and reducing methane from rice paddies). The fourth section discusses possible entry points in the mainstreaming process (such as poverty reduction, food security, or rural development strategies). The fifth and final section discusses the transition from mainstreaming to implementing climate change mitigation and adaptation measures in agriculture, including stakeholder consultation processes and the role of donors and other mechanisms for financing activities

### ***Mitigation***

**Bockel, Louis, Garry Smith, Marjory Bromhead, Martial Bernoux, Marianne Tinlot, Henry Matieu, and Giacomo Branca. 2011. *Mainstreaming Carbon Balance Appraisal in Agriculture: A Tool to Measure the Carbon-Balance*. Rome: FAO.**

Available at:

[http://www.fao.org/docs/up/easypol/869/mainstream-crbn-blnc-apprs-agric-prj-plics\\_099en.pdf](http://www.fao.org/docs/up/easypol/869/mainstream-crbn-blnc-apprs-agric-prj-plics_099en.pdf)

This guide proposes using soil organic carbon as an “agri-environmental indicator” (one which tracks both climate change mitigation and sustainable development benefits) for policy monitoring in developing countries, and net carbon balance appraisal (the net changes in soil and biomass carbon stocks) as a tool for policy analysis. It discusses the various projects which have undertaken soil organic carbon assessments (Global Environment Facility Soil Organic Carbon projects, AFRICA – NUANCES project, and others), as well as tools and methods for estimating carbon balance, including Holos Software (entire farm modelling software), the Dairy Greenhouse Gas Model, DeNitrification-DeComposition or DNDC (an agro-ecosystem model of carbon and nitrogen biochemistry), as well as the Ex-Ante Carbon Balance Appraisal Tool developed and championed by the FAO. The guide also contains an interesting discussion of the Carbon Balance Appraisal approach’s compatibility with donor expectations and approaches in a developing country context, including climate-proofing, the World Bank’s efforts on mainstreaming climate change in the agricultural sector, and REDD+ (reducing emissions from deforestation and forest degradation plus the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries). The document’s focus on mainstreaming mitigation indicators (via carbon balance appraisal) makes it a noteworthy contribution to the mainstreaming literature.

## ***Adaptation***

**Oates, Naomi, Declan Conway, and Roger Calow. 2011. *The ‘mainstreaming’ approach to climate change adaptation: insights from Ethiopia’s water sector*. Overseas Development Institute Background Note. London: Overseas Development Institute. Available at:**

**<http://www.odi.org.uk/resources/details.asp?id=5667&title=climate-change-water-adaptation-ethiopia-mainstreaming>**

This brief identifies efforts to mainstream climate change in Ethiopia’s water sector, the progress made, and the challenges ahead. The authors highlight six strategic level and three operational level requirements for successful mainstreaming of climate change in the water sector. The strategic level requirements are: clearly defined institutional responsibilities; effective communication and coordination (between different sectors, levels of government, and between government and stakeholders); an inter-sectoral approach to water management (for instance, an integrated water resource management framework); flexible and adaptable decision-making processes; awareness and understanding of climate change issues; capacity of staff to address climate change on a daily basis. Operational requirements consist of: effective management of water supply and demand; improved hydrological monitoring and forecasting; integration of climate risks into the planning process. Also provides an interesting discussion of lessons to be learned from HIV/AIDS mainstreaming in national development and poverty reduction initiatives, and the opportunities and risks entailed in using disaster risk reduction or food security initiatives as a point of entry for climate change mainstreaming.

**United States Agency for International Development (USAID). 2009. *Adapting to Coastal Climate Change: A Guidebook for Development Planners*.**

**Washington: USAID. Available at:**

**[http://pdf.usaid.gov/pdf\\_docs/PNADO614.pdf](http://pdf.usaid.gov/pdf_docs/PNADO614.pdf)**

This guidebook provides a five-step plan for adapting to coastal climate change using the vulnerability assessment approach: 1) assess vulnerability; 2) select course of action; 3) mainstream coastal adaptation; 4) implement adaptation; and 5) evaluate for adaptive management. They note that that governments have several points of entry to mainstream coastal climate change including: national-level (such as NAPAs and disaster risk reduction and preparedness), sectoral investments and projects (such as tourism and fisheries), or coastal place-based (such as coastal municipalities and marine protected areas). Governments and civil society need to foster links between the three points of entry to maximize effectiveness, by creating enabling policy, financial and legal environments; harnessing local knowledge and experience; and through awareness-raising and education.

**World Bank. 2010. *Mainstreaming Adaptation to Climate Change in Agriculture and Natural Resources Management Projects*. Washington: World Bank. Accessed 28 September 2012 at: <http://climatechange.worldbank.org/climatechange/content/mainstreaming-adaptation-climate-change-agriculture-and-natural-resourcesmanagement-project>.**

This guide is organized as a series of eight related guidance notes on the mainstreaming process in agricultural and natural resource projects: 1) identifying and engaging local institutions; 2) engaging local communities; 3) assessing climate risk; 4) strengthening capacity and policy frameworks; 5) promoting an enabling institutional environment; 6)

identifying adaptation measures; 7) evaluating potential measures via economic analysis; and 8) monitoring and evaluating activities. Guidance is provided on conducting cost-benefit analyses of adaptation measures, and several methodological options for conducting this analysis (agronomic, Ricardian, probabilistic impact assessment for extreme events) as highlighted.

## **6.0 List of Documents**

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