

SUMMARY OF THE 5TH CONFERENCE ON CLIMATE CHANGE AND DEVELOPMENT IN AFRICA (CCDA-V): 28-30 OCTOBER 2015

The 5th Conference on Climate Change and Development in Africa (CCDA-V) convened from 28-30 October 2015 in Victoria Falls, Zimbabwe, on the theme “Africa, climate change and sustainable development: What is at stake at Paris and beyond?” The Conference was organized by the Climate for Development in Africa (ClimDev-Africa) Programme, an initiative of the UN Economic Commission for Africa (ECA), the African Union Commission (AUC) and the African Development Bank (AfDB).

Approximately 400 delegates participated in plenary discussions, as well as sessions held in parallel over the three days, addressing the thematic strands of governance, climate science, sustainable development, climate finance, energy, agriculture, forests, gender, youth and disaster risk reduction. For the first time at the CCDA, a Solutions Forum was held, aimed at identifying practical strategies and initiatives that address climate change challenges.

Described as “Africa’s dress rehearsal” for the 21st session of the Conference of the Parties (COP 21) to the UN Framework Convention on Climate Change (UNFCCC), CCDA-V provided an opportunity for delegates to reflect on progress towards the UNFCCC’s stated objectives of stabilizing atmospheric greenhouse gas (GHG) concentrations and enabling sustainable development, especially in relation to the interface of climate change, sustainable development and equity issues provided for in Article 2 of the UNFCCC. The discussions built on the outcomes of several pre-conference events and side events, as well as the outcomes of an ‘Africa Climate Talks’ (ACT!) event held in advance of the meeting, to articulate and crystallize key messages for COP 21 and highlight strategies for the development of climate-sensitive policies and processes in the post-COP 21 period.

During the high-level opening plenary, Fatima Denton, Director, Special Initiatives Division, ECA, called for a “confident Africa” to send a message to COP 21 that the region is capable of “giving new meaning to its growth story,” and to say to the rest of the world “you no longer have the license to emit on our behalf and we are prepared to invest in smart development by using our current atmospheric space to green our economies and build climate-resilient infrastructure.”

In the same vein, various speakers urged delegates to use CCDA-V as a launching pad to consolidate and refine positions for COP 21. On the interface between climate science and policy in Africa, there were calls to strengthen



Traditional performers welcome delegates to the 5th Conference on Climate Change and Development in Africa (CCDA-V)

technical capacities in climate modeling, and to support climate information services for effective climate change risk management and resilience.

Key messages and conclusions from CCDA-V included the need to: recognize that adaptation is crucial but that Africa should not overlook opportunities for mitigation in forestry, transport and agriculture; articulate more ambitious goals than those expressed in the intended nationally determined contributions (INDCs) submitted under the UNFCCC; further develop homegrown climate information and policy frameworks that are responsive to Africa’s needs; break the disconnect between science and policy; and strengthen governance practices and domestic resource mobilization to scale up proven green development strategies and innovations.

To bolster these messages, delegates heard from experts working on a number of regional initiatives, such as the Africa Renewable Energy Initiative, as well as the Africa Climate Change Adaptation Initiative which is set to scale up adaptation financing to up to US\$50 billion by 2020.

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A BRIEF HISTORY OF CCDA

CCDA was conceived as an annual forum to enable linkages between climate science and development policy by promoting transparent discussions between key stakeholders in the climate and development community. The Conference seeks to mainstream climate information into decision making and strengthen capacities focusing on climate-sensitive sectors such as agriculture, food security, energy and transport. The Conference achieves this objective by bringing together researchers, policy makers, development practitioners, climate scientists, user groups and other stakeholders to better understand contemporary climate change issues. In so doing, they contribute towards the identification and elaboration of appropriate responses, including providing support for policy responses, mitigation, adaptation and technological innovations.

CCDA is organized under the auspices of ClimDev-Africa, a partnership of the ECA, AUC and AfDB. It also builds on other continental platforms and initiatives, including: the African Development Forum; the African Ministerial Conference on the Environment; the Conference of African Heads of State and Government on Climate Change; the Global Climate Observation System (GCOS) and its sub regional climate programme; and the Africa-EU Climate Change Partnership.

CCDA-I: The inaugural conference convened from 17-19 October 2011 in Addis Ababa, Ethiopia, and explored the theme ‘Advancing Knowledge, Policy and Practice on Climate Change and Development.’ It brought together three main categories of participants: high-level decision makers; science and technology specialists from climate research institutions; and representatives of the practitioner community, including private sector, civil society organizations and the media, to share lessons, identify gaps and future needs, and discuss a range of potential solutions for meaningful impacts.

CCDA-II: Held from 19-20 October 2012 in Addis Ababa, Ethiopia, the second conference addressed the theme ‘Development First: Addressing Climate Change in Africa.’ It focused on three sub-themes that aimed to highlight strategies and demonstrate best practices in the areas of: climate services delivery for development; sustainable energy access for all Africans by 2030; and outstanding issues in climate negotiations: relevance for Africa.

CCDA-III: The third conference took place from 21-23 October 2013 in Addis Ababa, Ethiopia, and addressed the theme ‘Africa on The Rise: Can the Opportunities from Climate Change Spring the Continent to Transformative Development?’ The meeting advanced discussion on proposals to establish a special ClimDev-Africa fund, to be housed at the AfDB, which would aim to mobilize up to US\$40 billion annually.

CCDA-IV: Convening outside ECA headquarters for the first time, the fourth conference took place from 8-10 October 2014, in Marrakesh, Morocco, under the theme ‘Africa Can Feed Africa Now.’ CCDA-IV addressed the connections between climate and agriculture, examining how climate-smart agriculture can increase resilience, how climate change will affect the livelihoods and food security of vulnerable populations, and how climate knowledge can bolster agricultural productivity. During the Conference, the AfDB announced the establishment of the US\$33 million ClimDev-Africa Special Fund (CDSF) which would focus on climate information infrastructure and building capacity for climate change information gathering and dissemination in the region. Private and public institutions were invited to submit proposals to “build viable, reliable and regular climate information sources.”

Africa Climate Talks (ACT!): ACT! was conceived as a multi-stakeholder democratic space for discussion on topical climate change issues. The first event, held from 3-5 September 2015 in Dar es Salaam, Tanzania, under the overall theme ‘Democratizing Global Climate Change Governance and Building an African Consensus toward COP 21 and Beyond’ provided input to CCDA-V.

REPORT OF THE MEETING

OPENING SESSION

OPENING PLENARY: The 5th Conference on Climate Change and Development in Africa (CCDA-V) opened on Wednesday morning, 28 October. During the opening session chaired by Justus Kabyemera, African Development Bank (AfDB) and moderated by Chukwumerije Okereke, University of Reading, James Murombedzi, UN Economic Commission for Africa (ECA), welcomed participants and highlighted the themes of the parallel sessions to be held over the course of the conference. Okereke described the conference as an opportunity to take stock of Africa in the climate change and development agenda from the 1992 UN Conference on Environment and Development to the present, and apply the lessons learned in the run-up to Paris and beyond.

Fatima Denton, Director, Special Initiatives Division, ECA, outlined the path from CCDA-I to CCDA-V, noting the conferences provide a strategic space for a broad range of stakeholders to discuss the hard choices involved in addressing climate within the broader development context. She described CCDA-V as “Africa’s dress rehearsal” for the 21st session of the Conference of the Parties to the UN Framework Convention on Climate Change (COP 21) taking place in December, refocusing attention on UNFCCC Article 2 (objective) and ensuring interactions among scientists and policy makers.



Oppah Muchinguri-Kashiri, Minister of Environment, Water and Climate, Zimbabwe; Vice President Emmerson Mnangagwa, Zimbabwe; Cain Mathema, Minister of the State of Matabeleland, Zimbabwe; Aliou Jammeh, Minister of Youth and Sports, the Gambia; and Mathias Tongofa, Deputy Minister of Youth, Indigenisation and Economic Empowerment, Zimbabwe, stand to sing the Zimbabwe National Anthem to officially open the meeting

In a keynote presentation on the interface between climate science and policy in Africa, Frederick Semazzi, North Carolina State University, stressed that lack of capacity, in terms of training and research, is a major limiting factor for the formulation of effective strategies to address climate change risk management, and contribute to adaptation and mitigation. Noting a cycle of poor support and funding for climate science and climate services resulting in low adaptive capacity to meet stakeholders' needs in Africa, he stressed the need for "homegrown" research contributing to climate research capacity and expertise for better climate policy and legislation.

Responding to the keynote address, Rungano Karimanzira, Ministry of Science and Technology Development, Zimbabwe, emphasized that Africa lacks climate modeling capacity for data collection. She suggested the establishment of think tank platforms across different sectors, in order to harness Africa's expertise and global initiatives such as Future Earth and support the generation of sound scientific evidence to strengthen research infrastructure in Africa.

HIGH-LEVEL PANEL DISCUSSION: Moderator Tinayeshe Mutazu, Acting Permanent Secretary, Ministry of Environment, Water and Climate, Zimbabwe, welcomed delegates, calling for Africa to use this conference to agree on general negotiating positions for COP 21.

Cain Mathema, Minister of Provincial Affairs, Matabeleland, Zimbabwe, said climate change is controversial as it pits environmental concerns regarding carbon emissions against development issues, noting that for Matabeleland to develop, it would need to expand its manufacturing sector.

Almami Dampha, African Union Commission (AUC), on behalf of the AU Commissioner for Rural Economy and Agriculture, Tumusiime Rhoda Peace, noted that CCDA-V comes on the heels of the adoption of the 2030 Sustainable Development Agenda and offers an opportunity for Africa to devise strategies to address the Sustainable Development Goals (SDGs). Highlighting the potential contribution of the SDG target on land degradation neutrality, as identified by the UN Convention to Combat Desertification, to action on climate change, he urged delegates to use CCDA-V as a launching pad to consolidate and refine positions for COP 21.

Describing 2015 as "a year of cascading transitions," Fatima Denton highlighted the need to consider what Africa can do for itself supported by others within a "new world order" where the continent is able to act as the main purveyor of climate services. Describing some initiatives of the ClimDev-Africa Programme, she highlighted its support for the preparation of intended nationally determined contributions (INDCs). Denton also called for a collective and unified African voice at Paris COP 21, demanding an ambitious, inclusive, fair and robust treaty based on the principle of common but differentiated responsibilities (CBDR).

Mary Manneko Monyau, AfDB, described the Bank's support to African countries to seize low-carbon resilient growth opportunities through the provision of increased climate finance of up to US\$5 billion annually by 2020. Highlighting energy as a priority, she stressed that Africa is tired of "being in the dark," and called for, *inter alia*: "ambitious, not ambiguous commitments"; practical solutions for climate resilience in Africa; and increased access to multilateral climate funds and mobilization of domestic funds.

Mathias Tongofa, Deputy Minister of Youth, Indigenisation and Economic Empowerment, Zimbabwe, outlined the lack of climate action since COP 15 in 2009, despite the commitments made, especially concerning financing. He highlighted the importance of: drawing on domestic funds for adaptation; allocating funds equally between mitigation and adaptation; and ensuring clear outcomes from COP 21, including on the provision of finance by developed to developing countries for implementation.

Aliou Jammeh, Minister of Youth and Sports, The Gambia, highlighted a multi-partnership programme established in his country to empower youth to develop entrepreneurial skills in agribusiness management and renewable energy production in rural areas.

Anne Madzara, UN Development Programme (UNDP), Zimbabwe, explained how extreme weather events and rainfall variability are already contributing to economic losses and increased vulnerability in Zimbabwe. She reiterated UNDP's commitment to building national capacity to address climate change, emphasizing the need for climate finance to reach the poor and most vulnerable. She further called for Africa to push for a governance framework that ensures developing countries will attain sustained and inclusive economic growth.

Laurent Godefroy, Attaché de Cooperation, French Embassy in Zimbabwe, provided an update on the recent UNFCCC conference in Bonn, on behalf of the COP 21 Presidency. He noted that the Bonn outcome text will require further informal discussions by climate negotiators to ensure the highest possible political commitments and priorities leading up to COP 21, in view of the fact that a Paris agreement will require compromises that are likely to be highly political.

Oppah Muchinguri-Kashiri, Minister of Environment, Water and Climate, Zimbabwe, described the opportune timing of the current development of Zimbabwe's climate change policy in the lead up to COP 21. She highlighted the importance of renewable energy, agriculture, youth and women in building a climate change-resilient Africa, and called for informing policy with research and CBDR.

OPENING CEREMONY: Following a cultural presentation, Muchinguri-Kashiri, introduced Vice President Emmerson Mnangagwa of Zimbabwe.

Vice President Mnangagwa welcomed participants to Zimbabwe, describing COP 21 as a unique chance for Africa to assert itself in global climate governance. He underscored the need to enhance sustainable development in the context of a changing climate and called for conference participants to capitalize on the conference to share as much knowledge as possible.



Fatima Denton, Director, Special Initiatives Division, UN Economic Commission for Africa (ECA)



Vice President Emmerson Mnangagwa, Zimbabwe



James Murombedzi, ECA, presents key messages from the African Climate Talks (ACT!)

PLENARY SESSIONS

KEY MESSAGES FROM THE AFRICA CLIMATE TALKS: On Thursday morning, James Murombedzi, ECA, reported key findings from the Africa Climate Talks (ACT!), a precursor event to CCDA-V, saying it brought together members of civil society, policy makers and youth from across East and Southern Africa, and Indian Ocean small island developing States (SIDS), to define a distinctly African narrative to combat climate change. Using video clips, he highlighted some of the conclusions of the talks, including the need to: speak with a common African voice at COP 21; defend the founding principles of the UNFCCC; link policy with indigenous knowledge; establish clear legal processes for land-use management; and critically assess the relationship between technology and labor in agriculture, a sector that holds a significant role in employment in Africa.

UNDERSTANDING THE IPCC 5TH ASSESSMENT REPORT (AR5): IMPLICATIONS FOR AFRICA: This panel discussion session took place on Thursday morning and was chaired by Chukwumerije Okereke and moderated by Edith Adera, International Development Research Centre (IDRC).

Joseph Katongo Kayanga, Intergovernmental Panel on Climate Change (IPCC) 5th Assessment Report (AR5) Lead Author, presented on observed climate trends and future projections for Africa, drawing attention to key messages from the report, including that: the climate has changed and physical impacts are already being experienced; human activities have likely been responsible for warming; further climate change is inevitable in the coming decades; and climate change poses a challenge to growth and development.

Opha Pauline Dube, University of Botswana, IPCC Working Group (WG) II, presented on the impacts of climate change and vulnerability in Africa. On cities, she highlighted some of the projected vulnerabilities including increased adaptation costs to approximately US\$40 million a year by 2030. Dube emphasized that water stress will increase particularly in areas

that are already water deficient. Regarding food security, she drew attention to threats to food and cash crops due to higher temperatures, but noted that maize and cassava production may stand to benefit from higher temperatures at certain altitudes.

Shadrack Mwakalila, Lead Author IPCC WGII, spoke about adaptation risks in Africa, and the potential for adapting to these risks. For risks related to water stress, he noted that AR5 proposes strengthening institutional capacities. For risks related to reduced crop production, he highlighted that a potential adaptive response is increasing investment in requisite technologies. Mwakalila also pointed to the water-energy-food nexus which will be affected by temperature increases due to climate change, and stressed that there is no one-size-fits-all approach to adaptation.

Okereke, presenting in his role as IPCC Lead Author, WGIII, noted that despite the proliferation of climate reduction efforts and policies, GHG emissions have increased. He explained that this does not mean climate policy is ineffective but that policies are being dwarfed by increasing emissions. Okereke emphasized that a central challenge for Africa lies in increasing energy security through substantial scaling up of low-carbon energy technologies.

In the ensuing discussion, participants noted that climate change is still poorly understood at the local level, that the main victims of climate change have little knowledge and poor capacity to cope with its effects and that IPCC reports should be made widely available. A question on the fate of past agreements and goals, such as the OMEGA Plan for Africa or the Millennium Development Goals (MDGs), was also raised, with calls for COP 21 to go beyond the business-as-usual model.

Panelists highlighted that: it is time to spread the vision of AR5 at all levels, including to local communities; strategies should include national, regional and community levels; and all IPCC reports are freely available on the IPCC website.

Closing the Panel, Okereke stressed that the strategy for Africa in Paris should be to, *inter alia*: urge global ambition on emission reductions as well as adaptation actions; secure financial support for technology transfer and capacity building; and clarify ambiguities relating to Africa's own agenda and long-term sustainable development plans in order to attract and absorb finance. He concluded by noting the importance of two regional initiatives in the lead up to Paris: the Africa Renewable Energy Initiative aiming at increasing renewable energy by 40 gigatons by 2030 and the Africa Climate Change Adaptation Initiative to scale up the support for adaptation to US\$5 billion between now and 2020.

AFRICA AND GLOBAL CLIMATE CHANGE GOVERNANCE SINCE KYOTO: This plenary session on Thursday morning was chaired by Chukwumerije Okereke and moderated by Edith Adera.

Keynote speaker Seth Osafo, African Group of Negotiators (AGN), provided a detailed background of climate change negotiations from the establishment of the UNFCCC and



Chukwumerije Okereke, University of Reading



Seth Osafo, African Group of Negotiators (AGN)



Mithika Mwenda, Pan-Africa Climate Justice Alliance

agreement on the Kyoto Protocol to the lead up to COP 21. He outlined the challenges in developing a post-Kyoto Protocol agreement, describing the transition from commitments to contributions and stating that the INDCs submitted so far are not ambitious enough to save the planet. Focusing on Africa, Osafo said negotiators are doing well but face challenges including lack of funding and high turnover of ministers attending climate COPs. He called for national financial commitments to better leverage international finance, and “doing better” in the negotiations in Paris.

Highlighting that previous junctures in the climate negotiations, such as Kyoto and Copenhagen, have not produced favorable results for Africa, Mithika Mwenda, Pan-African Climate Justice Alliance (PACJA), stressed that Africa needs an equitable agreement in Paris that is responsive to Africa’s realities and aspirations. He underscored the need to field strong negotiators familiar with the process, expressing frustration with the current African Co-Chair of the *Ad Hoc* Working Group on the Durban Platform for Enhanced Action (ADP), whose text has been rejected by civil society as being “unbalanced.”

Washington Zhakata, Climate Change Management Department, Zimbabwe, underlined that the negotiations require a measure of gravitas for a stronger African position in Paris, and noting that as external financial resources for adaptation are not forthcoming, the continent needs to explore domestic resource options. He called on negotiators to “press developed countries” to honor their financial commitments and also to reduce emissions domestically, rather than rely on the carbon market.

Jeremiah Lengoasa, World Meteorological Organization, highlighted *inter alia*: the role of a potential mechanism promoting dialogue between policy makers and scientists during the preparatory phase of negotiations; the potential for the UNFCCC to verify INDCs through an integrated global GHG information system in which all parties would be independently assessed by the scientific community; and the possible role of a UN climate institution to coordinate efforts across UN agencies for climate negotiations and the implementation of agreements.

Godwell Nhamo, University of South Africa, emphasized that Africa must adhere to its non-negotiable priorities in the climate change negotiations. He identified Africa’s unique bargaining position in terms of its resilience capacity, noting that a clear adaptation component, a push for proven technologies that are fit for purpose, and resources in terms of numbers of African negotiators at the table, will be critical to advancing Africa’s priorities at COP 21.

In the ensuing discussion, some participants urged leaders to sign the Doha Amendment to ensure that the Kyoto regime is maintained between now and 2020 when a new agreement is expected to enter into force. Others addressed the issue of civil society participation in the Paris negotiations.

Osafo highlighted key issues for Africa in Paris, including the need for: a balance between mitigation and adaptation in the new agreement; the continued relevance of CBDR; and the provision of funding for vulnerable countries to adapt and meet their commitments. With respect to loss and damage, he said its inclusion in the new agreement is still being debated as is the question of its review every five years.

EVALUATION OF THE PERFORMANCE OF ARTICLE 2 OF THE UNFCCC WITH REGARD TO AFRICA: On Friday morning, delegates held a roundtable discussion to evaluate the performance of UNFCCC Article 2 in relation to Africa. This session was chaired by Franklyn Lisk, University of Warwick.

In his presentation, Chukwumerije Okereke stated that monitoring the implementation of Article 2 has been difficult due to its length and convoluted nature. He stressed that many factors that constitute climate risk have less to do with anthropogenic causes and more to do with vulnerability due to governance, development levels and socioeconomic factors.

Okereke urged Africa to recalibrate its relationship with China, and support accounting on the basis of per capita emissions. He underlined that although Africa has met all its obligations regarding the preparation and submission of National Adaptation Programmes of Action (NAPAs) and INDCs respectively, financing has been insufficient to meet the needs identified, particularly in relation to agriculture.

Okereke opined that development on the continent cannot be tied to the climate agreement, highlighting Africa’s favorable development trajectory despite the lack of success in the implementation of Article 2. Calling for a stronger focus on sustainable development over climate change, he urged the continent to take a more proactive role in technology development and production.

David Lesolle, University of Botswana, identified several key issues for Africa to pay attention to at COP 21 including the need to: end the “blame-game”; turn National Adaptation Plans (NAPs) into actionable programmes of work; build policy on unified strategic foundations across Africa; and find the ‘sweet spot’ between mitigation and adaptation strategies.

Paul Desanker, UNFCCC Secretariat, emphasized that the least developed countries (LDCs) are benefiting from national adaptation planning in terms of awareness but require greater support to access funding for medium to long-term planning. He described the evolution of NAPs since 2001, stressing guiding principles which promote NAPs as country-owned, gender-responsive, supported by comprehensive monitoring and review processes, and based on traditional knowledge, best available science and the interests of vulnerable groups. Desanker noted that COP 21 must reinforce NAPs and provide coherence to the process to allow greater access and support for implementing adaptation plans.



David Lesolle, University of Botswana



Cristina Vicente-Ruiz, representative of the European Union (EU) delegation to the African Union (AU)



Nana Ama Browne Klutse, Ghana Atomic Energy Commission

Nkiruka Nnaemego, African Youth Initiative on Climate Change (AYICC), noted the importance of NAPAs and the monitoring of Nationally Appropriate Mitigation Actions (NAMAs), questioning their simplicity for average people and highlighting the need to monitor what their associated impacts on livelihoods are. She noted the importance of: tracking progress achieved to identify best practices; building on indigenous and local knowledge; ensuring cooperation and partnership, and avoiding duplication; and engaging all key stakeholders. Nnaemego highlighted the need for national governments to assess progress, deploy the political will to address gaps, and implement effective accounting mechanisms for funding.

Washington Zhakata stressed the nexus between fossil fuels, politics and climate change, noting the opportunity for transition to renewable energy in Africa to effectively address mitigation. He concluded with a call, in the context of the lead up to Paris, for accountable and transparent management of resources to implement Africa's commitments, and for all Annex I countries to reduce their emissions domestically, noting that otherwise, "the climate will continue to change."

Seth Osafo called for reflection on progress made since the UNFCCC was negotiated, stating that there has been a shift towards focusing on the process of meeting the objective of the UNFCCC instead of just looking at the objective itself.

In the ensuing discussion, participants considered: the role of science and Africa-driven narratives in negotiations; implementation of climate commitments as a big challenge and the need to look inward to drive development; the importance of addressing mitigation at the global level and not necessarily always at the national level; and the importance and challenge of agreeing on modalities for review of implementation.

Following the plenary, Cristina Vicente-Ruiz, Representative of the EU delegation to the African Union, presented the EU's position on the climate change negotiations, with the objective of identifying areas of collaboration for the post-2015 period. Highlighting the partnership between the EU and Africa, she drew on the many overlaps in their positions including on INDCs, climate finance and reaching a legally-binding and secure agreement in Paris. She highlighted that one potential difference in positions between the EU and Africa relates to taking new economic contexts into account to reflect evolving responsibilities.

PARALLEL THEMATIC SESSIONS

CLIMATE SCIENCE: Climate Change Trends and Projections: This session on Wednesday afternoon was facilitated by Brad Garanganga, Southern African Development Community (SADC) Climate Services Center.

Nana Ama Browne Klutse, Ghana Atomic Energy Commission, presented the results of a study predicting future climate impacts resulting from rising temperature in six ecological zones in Ghana. She described the projected increases and decreases in rainfall and minimum and maximum temperatures in the near, mid and far future. She stated increasing concerns around food security due to projected increases in incidents of floods and prolonged droughts coupled with low adaptive capacity.

Richard Graham, Met Office, UK, described the Impala Project consisting of a partnership between the UK and Africa that aims to increase the performance of climate modeling in Africa to improve decision making and climate information. He explained that the Project uses different modeling approaches to examine global, regional and local climate patterns and processes over 5-40 year timeframes, and talked about improving models through ongoing evaluation.

During discussions, participants highlighted, *inter alia*: variability in results of different climate models; interpretation of models; timeframes of models; and challenges in modeling.

Understanding Climate Change Impacts: This session on Wednesday evening was facilitated by Elisha Moyo, Ministry of Environment, Water and Climate, Zimbabwe, and James Kinyangi, CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Alex Nimusiima, Makerere University, described research on future climate scenarios over the central Uganda cattle corridor. He said the study involved a comparative analysis between regional climate models known as Representative Concentration Pathways (RCPs) and IPCC Special Reports on Emission Scenarios, to determine projected temperature and rainfall values in the near future and mid-century periods.

In the ensuing discussion, participants highlighted discrepancies between the research findings and other simulations that predict overall decreasing rainfall throughout East Africa, emphasizing that reliance on regional climate models alone are insufficient due to scalar uncertainties. Participants noted the need to, *inter alia*: integrate farmer observations of climate change to ground truth models; examine other parameters, such as topography and hydrology, to strengthen the robustness of regional climate models; and enhance communication of science to farmers to enhance climate change adaptation.

In his closing remarks reflecting on the issue of uncertainties in climate models, Moyo underscored the role of investing in practices that "still make sense today and in the future" while continuing to work with emerging science to refine decision making.

Climate Science and Policy Applications: This session took place on Friday morning and was facilitated by Joseph Mutemi, Intergovernmental Authority on Development (IGAD) Climate Prediction and Application Centre.

Maureen Wanzala, IGAD Climate Prediction and Application Centre, presented on the performance of global climate models in simulating the present and future precipitation over the Lake Victoria Basin. Noting the unique micro-climate in the region, she said the project used data from 14 local weather stations to test the accuracy of several CMIP5 models, noting predictions of drier conditions towards the eastern part of the study region. She concluded that while CMIP5 models could capture main features of seasonal mean rainfall distribution, most models struggled to capture the observed patterns.

Amadou Mahamadou Laouali, Kwame Nkrumah University of Science and Technology, presented an evaluation of remotely sensed and forecasted rainfall data for flood early warning in the Benue sub-basin of Nigeria, which used an adapted version of SKY-LUDAS, an integrated land-use model, to incorporate perceptions of climate change among local farmers. He said the simulations revealed that farmers with greater awareness of climate change had reduced their cultivation of mixed cereals, while expanding rice and groundnut crops. Noting that these measures resulted in increased income, compared to farmers that continued with mixed cereal farming, he described the land-use changes as successful local adaptation.

Mthobisi Nxumalo, South African Weather Service, discussed long-term homogenized temperature series in South Africa that entailed collecting, merging and verifying data sets from 1931-2014 using RhtestV4, which meets World Meteorological Organization (WMO) quality standards. Discussing the key findings, he highlighted: consistent trends in daily temperature; escalations in hot extreme trends compared to cold extreme trends; and warming trends in surface temperatures in southern Africa.

Concluding that “the global and local data all speak one language,” Nxumalo said the results will help to deepen understanding of temperature extremes in the region and can be incorporated in decision making. He recommended further applications of such work beyond South Africa, noting the RhtestV4 software is user-friendly and accessible via the WMO website.

In response to a question on whether the South Africa study provides firm evidence of climate change rather than climate variability, Nxumalo said the only certain conclusion is that climate change “is not fully proven yet.” Responding to a question on the seeming contradiction between the East Africa study and IPCC models, Wanzala noted that this might be explained by the fact that it is difficult for global models to accurately capture rainfall events in the Lake Victoria Basin as they are controlled by mesoscale systems.

SUSTAINABLE DEVELOPMENT: Climate Change

Impacts on Sustainable Development: Session 1: This session took place on Wednesday afternoon and was facilitated by Hezron Mogaka, Association for Strengthening Agricultural Research in Eastern and Central Africa.

Wahome Muthee, World Agroforestry Centre, presented ongoing research on ecosystem-based adaptation (EbA) analyzing two NAPAs in Burkina Faso and Mali. Describing some common characteristics of the 31 projects analyzed, he noted most have a thematic and subnational focus primarily on agriculture, water, energy and forestry sectors, and are allocated low budget priority. He highlighted some of the conclusions including the need to integrate indigenous and contemporary knowledge, ensure that projects are sufficiently contextualized, and blend EbA and non-EbA approaches to adaptation.

Monica Karangi, Kenya Institute of Public Policy, Research and Practice, discussed policy challenges and opportunities in greening the road transport sector in Kenya. Noting that Africa’s low contribution to carbon emissions “is not an excuse,” she stressed emissions are growing due to increased urbanization, expanding economies and a “heavy policy bias” towards motorization. Using Nairobi as a case study, she lamented that the last land-use plan dates back to 2002 and that promising policy initiatives, such as the Bus Rapid Transport (BRT) system, have not been implemented due to opposing interests.

Karangi stated that to be green, transport policies must be inclusive. She called for, among other things, enhancing linkages between BRT and non-motorized transport systems, and making the modal shift from a focus on private cars towards smart growth concepts such as walkable cities and improved information and communication technologies (ICT) infrastructure.

In the ensuing discussions, participants highlighted the need to, *inter alia*: consider issues of land grabbing and speculation; recognize that EbA is just one tool in a suite of approaches and methodologies that can contribute to resilience; and distinguish between climate change and climate variability in policy formulation.

Session 2: This session on Wednesday evening was facilitated by Joseph Matowanyika, Chinhoyi University of Technology.

Belynda Petrie, OneWorld Sustainable Investments, described green economy pathways as being the link between climate change and the SDGs, and stated the need to go beyond a compliance approach to realize benefits. She outlined green growth entry points as including: export-led and increased trade; small and medium enterprise (SME) support and development; and clean technologies. Using the South African Renewable Energy Independent Power Producer Procurement Programme as an example, Petrie explained how green growth approaches can advance development delivering a range of social and environmental benefits and underscored the need for development agendas to get countries off the ground.

Ernest Nti Acheampong, Africa Technology Policy Studies Network (ATPS), discussed challenges and opportunities for low-carbon development in Africa. Presenting the results of a literature review, he said that although low-carbon practices exist and there has been progress in building some renewable energy infrastructure, challenges still remain when promoting a growing economy that is sustainable. He said current limitations include finance to facilitate low-carbon pathways, and energy insecurity coupled with cheaper, unclean energy competition.



A participant makes a contribution during the session 'Climate Change Impacts on Sustainable Development'

The ensuing discussion touched on: tradeoffs between green growth and poverty reduction; low-carbon approaches in global value chains; stimulating more inclusive growth through domestic investment; the role of environmental goods and services markets; the limits of low-carbon development; and the role of regional entities to address challenges.

GOVERNANCE: Africa and Global Climate Change Governance since Kyoto: Chukwumerije Okereke facilitated this session on Wednesday afternoon.

Stefan Raubenheimer, Mitigation Action Plans and Scenarios, noted that Africa “has been a spectator in the climate regime,” with sub-Saharan Africa only producing 1% of global emissions.

Okereke shared some climate change negotiation “axioms,” including: the climate and development paradox; climate change as a collective action problem; the triple asymmetry in cost, impact and the ability to decide; and the erosion of trust.

David Lesolle noted that Africa has to move forward, “whether it is fair or not,” and called on African negotiators to fight for the continent’s right to development. He stressed the need to build adaptive capacity on the continent and to prepare for any forthcoming financial support.

Chemist Gumbie, Forestry Commission, Zimbabwe, noted that there is some low-hanging fruit in terms of development tools that the continent can roll out with little or no international support, including REDD+, highlighting benefits that accrue from reforestation including tourism and increased biodiversity.

Participants at the session discussed: the need to incorporate the voice of labor in climate decisions; the fact that the moral approach to compensation will not work; the need for a new economic pathway for Africa; the danger of “living on promise”; the need to prepare for a 3°C world; and the lack of ambition displayed in the current “pledge and review” system. They further considered the importance of linking African-led research on climate change to development actions supported by the international community, and the need to hold “promise makers” accountable after Paris.

Non-State Actors in Climate Governance: Lyn Ossome, University of the Witwatersrand, facilitated the session on Thursday afternoon.

Ngeta Kabiri, UN University-Institute for the Advanced Study of Sustainability (UNU-IAS) presented on CBDR +Respective Capabilities, resource endowments and climate change governance in East Africa within the framework of Article 2. Noting that decarbonization of the economy remains a key sticking point in the UNFCCC governance process, he posed the question of whether Kenya and Tanzania can justify

continuing with coal projects, given that their energy stocks appear to be delivering on the mandate of the energy sector in Article 2.

Kabiri explained that geothermal and wind now represent close to 70% of Kenya’s energy mix, while Tanzania has huge reserves of natural gas that are already being piped. Concluding that “the era of sufficient, reliable, affordable and clean energy is here,” he called for East Africa to “creatively reimagine” UNFCCC instruments such as loss and damage, and REDD+. He noted that expensive and unsustainable energy projects are often started “in the name of the poor,” calling on civil society coalitions to ensure that vested economic interests “are not given a free pass.”

In the ensuing discussion, one participant suggested that trade agreements could “force” governments to face the true cost of energy investments.

Senay Habtezion, global change SysTem for Analysis Research and Training (START) International, discussed a research project exploring earth system governance in Africa, with a focus on agency and Article 2. He said one of the key findings of the study is the increasing role of polycentric approaches in global environmental change responses, especially in light of an anticipated “weak outcome of COP 21.” He noted, however, that it is difficult to generalize how polycentricism will impact the climate effort in Africa given diverse historical and geopolitical contexts, and called for further analysis of these global-local interlinkages in the context of devolution.

Responding to questions, Habtezion stressed that the political reality is that “the international climate process has failed,” noting this merits adopting more piecemeal approaches to climate governance, similar to those on adaptation projects or the SDGs.

Lessons Learned and Emerging Views From INDCs: This session on Friday morning was chaired by David Lesolle and facilitated by Webster Whande, Climate & Development Knowledge Network (CDKN).

Hlobile Sikhosana, National Climate Change Coordinator, Swaziland, described the rigorous process of developing Swaziland’s INDC. She outlined the mitigation and adaptation components at national and sectoral levels in the INDC, including: energy, transport and industry sectors for mitigation; and biodiversity, water and agriculture sectors for adaptation.

Evans Njewa, INDC Coordinator, Malawi, explained the consultation process used for developing Malawi’s INDC and said key lessons learned include recognizing the need for: holding stakeholder consultation to facilitate ownership of the INDC; building upon ongoing national processes; and



Delegates participate in a discussion on 'Africa and Global Climate Change Governance since Kyoto'



Participants ask questions during the session on 'Mobilizing Domestic Resources for Climate Finance'

increasing stakeholder awareness. He cited financial support, technology, capacity building and political will as key for the implementation of the INDC.

Peter Mulbah, GHG Mitigation and Inventory Expert for INDCs, Liberia, presented on the INDC process in Liberia drawing on existing information to identify key sectors contributing to GHG emissions. Focusing on both mitigation and adaptation he reviewed the three key adaptation sectors identified and included in the INDC: agriculture, transport and forestry.

Berhanu Solomon, Ministry of Environment, Ethiopia, talked about the limited understanding of the INDC framework at the beginning of the process and described government commitment and participation of local experts as being key to the process. He reflected on some of Ethiopia's experience, highlighting emerging issues for INDCs.

Selam Kidane Abebe, AGN Legal Advisor, outlined the process of INDC development within the negotiations saying negotiations have reached a point where INDCs will likely be part of mitigation contributions. She highlighted the need to further clarify the process of making individual commitments through INDCs and aggregating them at the global level.

Participants then discussed, among other issues, the role of forests in INDCs, dimensions of adaptation within INDCs, and Africa-wide INDC development.

What is at Stake at Paris and Beyond?: This session, facilitated by Thomas Sinkala, Chairman, Biofuels Association of Zambia, took place on Friday morning. Highlighting the complexity of the climate change process, Seth Osafo described the various regional and interest groups involved in the climate change negotiations, noting that Africa is the only continent that negotiates with one voice.

Osafo highlighted the role of African lawyers in supporting the negotiation process, and drew attention to an initiative training African lawyers to support the AGN at climate negotiations, led by the ECA's African Climate Policy Centre under the ClimDev-Africa Programme. He pointed to the fact that lawyers need to understand climate science in order to propose or understand the negotiation language, calling for a broadening of knowledge in order to keep abreast with the varying positions.

Diobe Gueye, AGN Senegal, spoke on the challenges and opportunities for the African Group at the negotiations in Paris and drew attention to the negotiating text provided by the Co-Chairs, saying it did not include the concerns of the African Group. He highlighted the African Group's call for international financial support for adaptation, and stressed that the agreement in Paris must be results-based, outcome-oriented

and legally-binding. He also shared that the African Group did not support proposals to include INDCs as an obligation for parties under the new agreement.

Selam Kidane Abebe spoke about the thematic areas being considered at the negotiations under the two workstreams, outlining proposals for further work post-Paris. She stressed that the Paris package should contain decisions to support implementation of the new instrument, as well as declarations on finance, renewable energy and adaptation. She highlighted the African Group's expectation on continued public funding for adaptation, highlighting talks on greater South-South cooperation as well as an increase in private and blended finance for implementation.

In the discussion, participants considered the need: for lawyers to meet with African negotiators prior to COP 21; to build linkages between lawyers and scientists at the climate change negotiations; for Africa to have empirical, multidisciplinary research to support negotiations and the implementation of adaptation and mitigation strategies; to insist on financing to address climate change; and to balance the scientific, political and economic concerns in Paris in order to adopt a robust agreement.

CLIMATE FINANCE: Mobilizing Domestic Resources for Climate Finance: This session on Wednesday afternoon was facilitated by Justus Kabyemera.

John Nyangena, Kenya Institute for Public Policy Research and Analysis, presented an analysis of Kenya's Climate Change Fund (CCF), highlighting key challenges including a lack of definitions and targets for funding adaptation and CCF allocation within existing national funding mechanisms. He said that despite these challenges, the national treasury has the potential to link national funding mechanisms with the Green Climate Fund to facilitate a non-donor-driven trickle down of finance for climate mitigation and adaptation.

In the ensuing discussions, participants emphasized: the role of the CCF in stimulating the green economy; the role of the private sector in demonstrating climate-smart investments using the CCF; and the need for a robust monitoring framework to ensure transparency in channeling funds. Many contributions focused on the difficulty of separating climate and development financing and the risk that climate funds are being appropriated for business-as-usual development without robust criteria or indicators on how such funding is being used.

Many agreed that climate funds must be used to influence how development is carried out rather than simply to justify development. Others emphasized that African countries must develop their own climate financing frameworks that are

not donor-driven and are contextual to national and regional environments, particularly those most vulnerable. Participants further noted that climate financing must involve screening development projects using climate-smart markers to assess GHG contributions and the potential for projects to contribute to climate mitigation and adaptation.

Innovative Finance for Climate Change Adaptation and Mitigation: Almami Dampha facilitated this session on Wednesday evening.

Gordon Bubou, National Center for Technology Management, Nigeria, spoke on public procurement for climate mitigation, noting that as “big spenders” the onus is on governments to promote green policy objectives. He cited the procurement and distribution of LED lights in Nigeria, and drew attention to government procurement that promotes low-emission-development pathways in Nigeria and South Africa.

Chinma George, Heda Research Centre, Nigeria, shared proposals for innovative financing for climate change adaptation. She proposed a surcharge on luxury goods and services to generate revenue for adaptation, and called for mobilizing the African Union’s African Risk Capacity agency to, among other things, cushion farmers against climate shocks and generate adaptation funding. She also called on African policy makers to better assess adaptation needs and costs in the continent.

Dampha underscored the need for Africa to better govern its resources and channel the requisite funds to adaptation activities. He urged building the infrastructure necessary for the collection of levies, and stressed the importance of political will to ensure funds are correctly used.

Participants then considered: accountability and transparency from governments for climate funding; building Africa’s business case for innovative funding; financing for loss and damage; and the importance of political will to spur investment in clean technologies. Many underlined developed countries’ obligation to honor climate finance pledges, with some noting that this was not charity, but “a demand.”

GENDER: Gender and Vulnerability to Climate Change: This session on Wednesday afternoon was facilitated by Mahamadou Nassirou Ba, ECA.

Olawale Julius Aluko, Forestry Research Institute of Nigeria, reported on a study addressing adaptive strategies used by farmers facing water stress, highlighting that gender, age, farm size and level of education have significant impact on adaptive strategies to water stress. Describing findings in the Asa Local Government Area of Kwara State, Nigeria, Aluko said women were found to experience higher water stress than men, and also opted for different strategies to cope with the situation, such as contour planting, cover crop and mulching, rather than switching to livestock production, a strategy more commonly chosen by men. The results also highlighted the importance of access to resources, credit facilities and irrigation systems.

During discussions, participants addressed: issues of sample size and data interpretation; methodologies used including the selection of respondents and potential bias; other potential techniques and solutions, such

as collecting and channeling rainwater for its use in crop production; and the selection of crops that are more appropriate to retain moisture.

Gender and Climate Change Adaptation: This session on Thursday morning was facilitated by Rosalind Cornforth, University of Reading.

Sara Ennya, African Youth Initiative on Climate Change, presented on gender and adaptation to climate change. She noted that while climate change exacerbates existing gender inequalities and women’s exposure to climate threats across African societies, women can act as agents of change and therefore play a key role in shaping and delivering effective climate responses.

Ennya stressed the importance of mainstreaming gender into policy making, mitigation and adaptation planning and implementation, and climate financing. Concluding, she highlighted the need for bottom-up, local and innovative solutions to support gender equality and empowerment, contributing to climate change adaptation and mitigation.

During the discussion, participants addressed: opportunities related to gender and climate change, taking on board women’s knowledge and experience of adaptation, not only at the execution stage but also in decision making and planning; and building on women’s indigenous knowledge of resilient practices. They further stressed: the importance of information, communication and education: the use of communication modes that are accessible for women, including at the grass-root level, through *inter alia*, face-to-face meetings, radio programming and mobile phones; capacity building including on the use of technologies; education and ways to raise awareness and foster women’s involvement; and the use of disaggregated data and indicators.

The discussions also noted the need to put gender and climate change in perspective through, among other approaches: treating gender as a cross-cutting issue; building on interlinkages among youth, women and climate change; and engaging men, as in the “#HeForShe” UN Women social media campaign that works with men and boys as agents of change for the achievement of gender equality and women’s rights.

AGRICULTURE: Agricultural Adaptation: This session on Wednesday evening was facilitated by Solomon Mombeshora, Woman’s University in Africa.

Berhane Gebru, FHI 360, presented on ICT tools for improving livelihood resilience of smallholder farmers. Focusing on the cattle corridor in Uganda, which is prone to recurrent droughts, he described: the Climate Change Adaptation and ICT (CHAI) project aimed at helping farmers to cope with droughts and other climatic stresses through provision of information on, among others: seasonal



Sara Ennya, African Youth Initiative on Climate Change, speaks during the session on 'Gender and Climate Change Adaptation'



Solutions Forum on 'Agriculture'



Panelists from the session on 'Climate Change and Food Security'

weather forecasts and agricultural tools; markets; low-cost rainwater harvesting techniques; and drought and flood coping techniques.

Vimbayi Chimonyo, University of KwaZulu-Natal, outlined a crop simulation model used to develop best management practices and guidelines to improve water-use efficiency and yield in intercropping systems. Highlighting intercropping as a tool for increasing resilience in the face of climate change, she noted that simulations of an intercropping system with sorghum and cowpea indicated improved yield and water use efficiency, even in water-limited environments.

Awolou Sossa, The City College of New York, spoke on the Madden-Julian Oscillation (MJO), a global-scale disturbance that originates over the Indian Ocean and propagates eastward. He described a study focusing on the modulation of precipitation in West Africa by the MJO, especially near the Guinean coast, causing short-term extreme rainfall events resulting in flooding that damages crops and infrastructure. He further demonstrated that it is possible to accurately predict the likelihood of extreme rainfall events based on different phases of the MJO.

Responding to a question on whether the CHAI project considered receiving feedback from farmers and the way the information is provided to them, Gebru said farmers may send feedback at any point of the process and that information is channeled in local languages through, *inter alia*, FM radio broadcasts, text messaging, email and face-to-face meetings. On the selection of crops used in intercropping systems and the issue of organic or inorganic fertilizers, Chimonyo said intercropping systems are based on crop complementarity and compatibility, and that fertilizers should be considered in a sustainable way.

Climate Change and Food Security: This session on Thursday afternoon was facilitated by Elliot Bungare, Ministry of Environment, Water and Climate, Zimbabwe.

Veronica Makuvaro, Midlands State University, presented a study that aimed to simulate climate change effects on growth and yield of maize grown under semi-arid conditions. She explained that the study focused on smallholder farmer practices in central Zimbabwe, and that the results of her simulations under current and projected climate by 2050 showed a reduction in the number of days to reach physiological maturity due to climate change and an associated reduction of yield in certain cases. Concluding, Makuvaro

said future research and appropriate adaptation strategies are needed, such as including other crops varieties or improving their adaptability through selection.

Carlo Fadda, Bioversity International, reported on the mapping of crop suitability for climate change adaptation. Noting that by 2050, 40% of the world's lands could experience novel climates resulting in a decline of all major crops in Africa, he highlighted the 'Seeds for Needs' approach that enables the identification of crop varieties adapted to climate change.

Fadda stressed the use of genebank material and landraces in genetic improvement to select traits that present high potential for, among others, resistance to pests and adaptation to climate change. He underlined the participatory aspect of the project, involving the farmers in variety selection and testing, contributing to local learning and producing reliable, generalizable results at a reduced cost.

Elisha Moyo presented on climate variability and crop production in semi-arid areas, highlighting the importance of considering community perception in analysis and forming recommendations. Through a multidisciplinary approach focusing on communities, he observed that while community perceptions of the quality of a season in terms of rainfall or occurrence of floods remain relative, it is substantiated in some cases with data. He noted his results show a relationship between rainfall trends and crop production, and concluded that farmers' capacity to interpret and use weather information needs to be reinforced for better adaptation to climate change.

The subsequent discussion addressed, among others: factors affecting agricultural production, such as agriculture practices, seed improvement and fertilizer inputs; the use of varieties and techniques that simulate local management practices; ecological parameters used to determine the most adapted varieties; the accuracy of simulations and ways to upscale and replicate the results; the importance of yield and markets; and disaggregated analysis considering gender and youth.

Agriculture, Trade and Food Security: The session on Friday morning was moderated by Mithika Mwenda, and began with a presentation by Calvin Atewamba, UN University – Institute for Natural Resources in Africa, on the potential for decoupling enhanced agricultural production from the allocation of additional land for cultivation in the face of climate change within the Economic Community of West African States (ECOWAS) region. He highlighted research findings indicating that climate change will significantly affect

agricultural land allocation patterns in the ECOWAS region by 2050, requiring policy makers to support farmers in the region to improve food production capacity through optimal land use.

Nancy Laibuni, Institute for Public Policy Research and Analysis, Kenya, explored the spatial effects of climate change on agricultural production for food security, trade impacts and economic costs in the East African Community. In response to RCP 4.5 and 8.5 climate scenarios, she said her study examined crop supply response elasticities revealing that rainfall and temperature projections are highly variable in space and time, and government subsidies for key crops such as maize will increase substantially in the future.

Mahamadou Nassirou Ba analyzed greenhouse gas (GHG) emissions along the value chains of rice and maize in four West African countries to examine the relationship between output maximization and GHG emissions to identify optimal intervention strategies to maximize yield while minimizing emissions. He explained that the main source of GHG emissions is methane from rice production and fertilizer application for maize production, urging that policy be designed to reduce overall cost structures, mitigate emissions and increase agricultural yield.

In the ensuing discussion, participants discussed the potential of crop mixes to diversify the decision pathways for farm investments in the future given the threats of climate change, the risk of improper calibration of the models employed, and the need to incorporate increasing population pressure in agricultural yield models under climate uncertainty.

FORESTS: REDD+ and Forest-Based CDM Projects in Africa: This session took place on Thursday afternoon and was facilitated by Chemist Gumbie.

Vincent Oeba, African Forest Forum, delivered a keynote presentation reporting the results of a desk-based study examining forest-based Clean Development Mechanism (CDM) and REDD+ offset projects in Africa. He noted that there have been limited forest-based CDM projects, while there are a number of African countries involved in REDD+ with most still in the readiness stage.

Oeba identified challenges in forest offset projects including lack of updated forest inventories, inadequate technical and institutional capacity, and poor political commitment and stability; and recommended, among other things: investing in employment creation; a focus on social benefits; strengthening institutional frameworks and policy instruments; and increasing access to innovative research and technology.

Franklyn Lisk discussed *inter alia*: understanding the carbon market to be able to effectively participate in it; drawing on linkages between climate change and sustainable development; focusing on both mitigation and adaptation; investing in education and capacity to better facilitate a people-centered approach; focusing on the role of energy, employment creation and agriculture in facilitating green growth and sustainable development; and establishing resilient institutions.

Francis Johnson, Stockholm Environment Institute (SEI) Africa Centre, discussed the sectoral, fragmented nature of REDD+, and recommended combining the conservation and commercial sides of REDD+ to create employment, especially in rural areas. He further discussed the need to manage trees outside of the forest and the importance of the development “D” in CDM and the degradation “D” in REDD+.

Susan Chomba, African Research and Development Centre, posed a question on the lessons learned from the CDM that can be applied to REDD+, underscoring the need to examine the role forests play within sustainable development more broadly. She stressed the importance of safeguards to ensure direct benefits to local communities and understanding governance implications of REDD+ at both community and national levels.

The ensuing discussion covered, *inter alia*: methodologies for the measurement of carbon in forests; benefit sharing mechanisms and consultations; land tenure; carbon ownership; flows of money and resources for carbon offset projects; and moving from positive incentives to a focus on livelihoods.

ENERGY: Role of Bioenergy in the Global Energy Transition Towards Climate Resilience: On Wednesday afternoon, this session was facilitated by Linus Mofor, ECA.

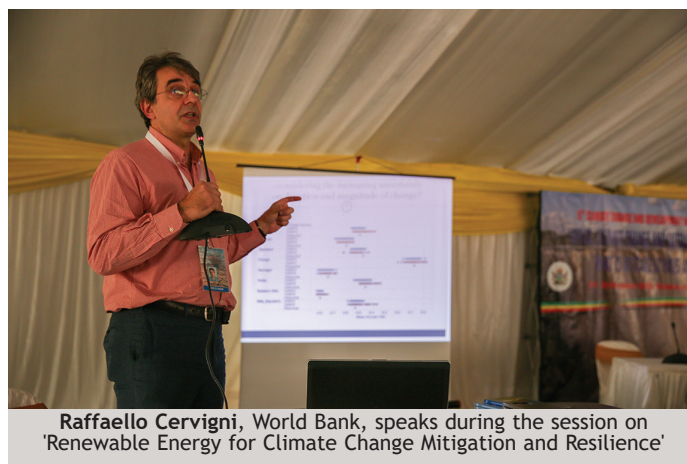
Muna Ahmed, University of Khartoum, presented a case study on introducing biogas as an alternative clean energy source in two villages in North Kordofan State, Sudan. Noting the diverse social and environmental benefits created, including time saved from collecting fuelwood, more study time for children, reduced smoke, and generation of organic fertilizer, she called for improved coordination among the diverse ministries involved, including on finance, agriculture, education, health and energy.

Thomas Sinkala, Biofuels Association of Zambia, described the introduction of liquid biofuels as being the equivalent of entering the “iron and steel age,” for many rural Africans, stressing it is the “only sustainable, predictable sector for the poor.” He noted that in comparison to inefficient and environmentally destructive biomass sources, such as charcoal burning, up to 70% of the inputs for liquid biofuel can be sourced from rural smallholders, and cited projections that local Zambian communities could earn up to US\$2.43 billion from the sector by 2030.

Anne Nyambane, SEI Africa Centre, discussed experiences from Malawi and Mozambique in substituting bioethanol for household charcoal use. She noted that the Cleanstar project in Mozambique had achieved a significant market penetration of 30,000 users within 18 months, while Malawi had succeeded in establishing small-scale mills in rural areas. She noted that in addition to establishing a network of biofuel entrepreneurs, the project yielded insights on how to balance economic and social benefits with ecosystem services.



Franklyn Lisk, University of Warwick



Raffaello Cervigni, World Bank, speaks during the session on 'Renewable Energy for Climate Change Mitigation and Resilience'

Francis Johnson, SEI Africa Centre, discussed some lessons from household cooking bioethanol ventures in Africa, contrasting this with the predominance of transport-sector applications for biofuels in developed countries. Among policy lessons, he highlighted: removing fossil fuel subsidies; regulating ethanol prices in the short-term; incorporating a wider range of landscapes and feedstocks; and building human capital.

Justus Kabyemera outlined the status of the ClimDev-Africa Special Fund, noting it was officially launched at CCDA-IV, and is currently undertaking pre-appraisal of 82 bankable projects that were selected from the initial 132 applications received, in collaboration with the five regional climate centers.

In discussions, participants debated whether biofuels are affordable for the rural poor and if they contribute to food insecurity, highlighting, *inter alia*, the need to: learn from failed projects; ensure inclusive financing; take a long-term perspective; and factor in the full environmental and social costs and benefits of such projects.

Renewable Energy for Climate Change Mitigation and Resilience: This session on Thursday afternoon was facilitated by Edward Samuriwo, Office of the President and Cabinet, Zimbabwe. Raffaello Cervigni, World Bank, highlighted the results of a report, which examines the performance of investments in infrastructure improvement using a range of climate scenarios to enhance the “investment readiness” of African countries for climate-resilient infrastructure.

Safiatou Alzouma Nouhou, International Renewable Energy Agency, presented the ‘Africa 2030: Roadmap for a Renewable Energy Future’ report, which illustrates the substantial role that modernized biofuels will play in replacing fossil fuels on the continent, particularly through improved cook stoves for heating and cooking. She emphasized that renewable energy requires considerable investment, highlighting several examples across Africa of using solar photovoltaic and wind power technologies that are among the most competitive in the world.

Hilton Trollip, University of Cape Town, illustrated a typology of development pathways based on GHG emissions and prosperity levels, to model low-energy development pathways in four African countries. He underscored the importance of evidence-based integrated climate scenario planning, which contributes to decision making in accordance with national-level priorities, rather than the often profit-driven objectives of multilateral organizations.

In the subsequent discussions, participants; raised concerns over the cost of renewable energy uptake in Africa which would require substantial political commitment; highlighted the

need to channel financial mechanisms for renewable energies to project developers *vis à vis* existing and improved national regulatory frameworks; and underlined the employment prospects from low-carbon development pathways.

ENERGY: Policy and Regulatory Frameworks for Climate Change Mitigation – Renewable Energy and REDD+: This session on Friday morning was facilitated by Linus Mofor.

Francis Johnson provided a historical analysis of infrastructural development in the electricity and natural gas sectors in Zambia and Tanzania, respectively. Among key policy considerations, he highlighted the need for balance between, *inter alia*: liberalization and “the right to regulate”; attractive risk-return rates and accessible and affordable services; energy for export and local use; and leveraging private investment and ensuring sound public investments. Recalling the adage “one should not waste a good crisis,” he noted that Africa has an opportunity to leapfrog fossil fuels, enhance the transparency of state-business relations, and build local capacity to manage energy investments.

Chipo Mukonza, University of South Africa, discussed South Africa’s experiences in expanding the share of solar energy in the energy mix, noting the country is poised to benefit from the shift to a greener and more inclusive development path, in particular through the efforts of the Renewable Energy Independent Power Producer Procurement Programme. She said that through its criteria on local sourcing of solar components, and affordable pricing of solar products, the Programme has been successful in promoting improved energy access and generating employment.

During discussions, participants highlighted: the need to move away from “moralistic” justifications for renewable energy; that, in spite of the issue of “stranded” fossil fuel assets, investing in renewables is more cost-effective in the long run; and that the issue is not about avoiding fossil fuels altogether, but using them wisely.

Emmanuel Nuesiri, University of Potsdam, and Susan Chomba discussed findings from two studies of local representation in REDD+ projects, carried out under the auspices of the Responsive Forest Governance Initiative. Discussing lessons from Nigeria, Nuesiri noted that elected local government authorities were not invited to the two consultative meetings, despite the presence of many other stakeholders. He concluded that UN-REDD had “subscribed to symbolic politics” and called for greater involvement of elected local officials in future consultative processes, or, where such structures do not exist, provision of support initiatives that “move local governance arrangements in a democratic direction.”

Speaking on REDD+ institutional choices and their implications for local democracy in the Kasigau Corridor of Kenya, Chomba said an implicit assumption in the study was that institutional choices have a bearing on local democracy. Among key findings, she highlighted the fluid nature of local institutions and “a dynamic process of recognition and de-recognition” of local institutions by initially working with established local authorities, and then bypassing them to create parallel Local Carbon Committees. She noted that while they were not democratically elected, the new institutions were perceived as accountable and responsive to local needs, including through the public display of records, and employing local staff. Concluding that REDD+ has the potential to leverage democracy, she called for COP 21 negotiators to be aware of the implications of their institutional choices, as they also involve the transfer of material resources, power and legitimacy among partners.



Francis Johnson, Stockholm Environment Institute (SEI), speaks during the session on 'Policy and Regulatory Frameworks'



Panelists from the session on 'Capacity Building for Disaster Risk Reduction and Resilience'

In the ensuing discussion, participants highlighted, among other issues: that substantive (or elected) representation does not equate to substantive democracy; the importance of securing property rights and addressing information asymmetries to “realign” accountability at the local level; and ensuring that REDD+ projects provide clear mechanisms for accountability and redress.

DISASTER RISK REDUCTION: Capacity Building for Disaster Risk Reduction (DRR) and Resilience: Opening the session on Friday morning, Bernard Manyena, University of Manchester, reflected on the adoption of many global frameworks in 2015 including the Sendai framework and the SDGs, as well as the anticipated adoption of the Paris agreement. He stated it is important to think about how to ensure these agreements “speak to each other” in the African context, using resilience and risk drivers as key elements in this process.

Sharon Rusu, UN International Strategy for Disaster Reduction Regional Office for Africa, spoke on the Sendai Framework for Disaster Risk Reduction (DRR) describing its scope, purpose and components, and the history of DRR leading up to its adoption. She underscored the importance of putting risk at the center of development to encourage resilience and adaptation, and noted challenges in doing so, including weak accountability mechanisms and institutions, lack of standards, targets and baselines, and compartmentalization of disaster risk management.

Rusu highlighted the opportunity to build coherence across the international frameworks being adopted, and reviewed Africa’s participation in the DRR process.

Shingirai Nangombe, Meteorological Services Department of Zimbabwe, spoke on DRR in Zimbabwe, drawing on examples of evaluating the effects, causes and characterization of extreme storm events including microbursts. He called for improving the ability to predict extreme weather events, in part to better protect rural populations, through improved DRR programming, early warning systems and adaptation strategies.

Issues highlighted in the ensuing discussion covered the need to: develop policy recommendations for governments based on evidence; provide support for developing countries in DRR; understand risk drivers; and build capacity to build resilience.

YOUTH: This session on Friday morning was facilitated by Veronica Gundu, Ministry of Environment, Water and Climate, Zimbabwe, who called for the Green Climate Fund to have a youth-responsive component and for the Paris agreement to include intergenerational equity as well as equity for women and the rural poor.

Jessica Mukiri, Kenyatta University, focused on women and youth in East Africa in a discussion on energy access. She noted the lack of vocational training for youth in the production of green technology, and said that local banks are

unwilling to fund green energy projects. She recommended, *inter alia*, inclusive financial lending and the decentralization of technologies in order to provide access for women and youth.

Describing the irony that “people are allowed to leave their countries but not allowed to enter others,” Yordanos Estifanos, University of Oldenburg, presented the case of Ethiopian youth migrants in a study on migratory patterns as adaptation strategies to climate variability and resource degradation. He recommended that developed countries relax their migration policies against irregular migrants, as some of these migrations are a result of climate change.

Grace Mwaura, AYICC, described the process of engaging youth from developing countries in the climate change negotiations, informing participants that some of these youth delegates have been included in their national delegations. She lauded training programmes for youth engagement in the negotiations and stressed that, as youth make up 50% of Africa, negotiations on intergenerational equity is integral to the continent’s implementation efforts.

In the discussion, participants reflected on: IPCC findings that rainfall is projected to increase in East Africa and the effects of this on agriculture and migration; the profile of youth migration; the vulnerability of rural youth and their need to be represented in the climate change process; and opportunities for feeding into off-grid systems and the role of young people in this area.

SOLUTIONS FORUM

CLIMATE FINANCE: Convening on Thursday morning, this session was facilitated by Tom Owiyo, AfDB.

Kabiito Benedicta, Uganda Martyrs University, reflected on the monetization of climate change reversal efforts, expressing skepticism that capitalism and the “money lifestyle” could be part of the solution. Stefan Raubenheimer presented on adaptation, decision making and economics, explaining the need to shift from a “science-first” approach to investment, where investment decisions follow scientific recommendations, to a “decision-first” approach where investment decisions are made prior to introducing the science to support risk analysis.

Fouad Bergigui, UNDP, discussed adaptation finance in a post-2015 world, highlighting that domestic revenues of up to US\$2.5 billion to address adaptation can be raised through: addressing illicit financial flows; carbon levies on aviation and shipping; lotteries; pull mechanisms; green bonds; impact investing; debt swaps; innovation labs; and crowd-funding.

Charles Mulenga, Centre for Environment and Climate Change Dialogue, Zambia, spoke on opportunities for innovative finance for adaptation, cautioning that innovative

finance from the international community is not adequate, and calling for national strategies for domestically-driven innovative finance for adaptation.

Traore Ousman, University of Taiwan, presented a paper on microfinance opportunities for climate adaptation in the Sahel, emphasizing that microfinance can be an opportunity to sustain local-level actions on climate change. In his findings, he described a strong association between women with access to credit and an increase in climate adaptation projects in Mali, Burkina Faso and Niger.

In the discussion, participants considered, *inter alia*: the challenge of distributing adaptation financing to small-scale projects; Africa's need for domestic financing for adaptation; experiences in the use of adaptation funds; and the motivation behind microfinance schemes.

AGRICULTURE: This session on Thursday morning was facilitated by Margaret Mukahanana-Sangarwe, Zimbabwe Gender Commission.

Maurine Ambani, CARE Kenya, presented on a multi-country project to promote the provision of climate information services (CIS) for community-based adaptation and resilience. Among tools to build adaptive capacity at the local level, she highlighted the project's use of locally-relevant scenario planning through linking meteorological forecasts with local observations and knowledge.

During discussions, participants highlighted, *inter alia*, the need to: integrate CIS in sectoral ministries and development plans; tackle issues of trust associated with perceived unreliability of climate data; and work with existing institutions, including community media. One participant suggested relocating the responsibility for CIS from meteorological departments to agricultural extension services in order to enhance practical applications on the ground.

Veronique Ngagoum, University of Cameroon, discussed a study that aimed to identify fruit and forest species that can enhance the resilience of smallholders. She reported that initial findings showed a preference for banana species among farmers, which she attributed to the contribution of banana species to both food security and income generation. With regards to cocoa, she noted it will take time before farmers can generate real profits and called for further research on optimal species that can generate both nutrition and other co-benefits.

Monsuru Oladimeji Abiola, Federal University of Agriculture, Nigeria, discussed a study on the use of honey, a natural antioxidant, to ameliorate heat stress in chickens. He reported positive results in terms of increased egg production in the early stages of using honey as a feed supplement, but noted a negative effect resulting from long-term use, similar to the impact of excessive use of honey in humans, which can lead to accumulation of fat in the liver.

Following the presentation, participants posed questions on, *inter alia*: the applicability of the findings to other livestock sectors; the cost-effectiveness of using honey; comparability with alternatives, such as guava pulp or coconut water; adaptability of traditional versus hybrid chicken varieties; and the role of other factors in reduced productivity, such as quality of feed and sanitation.

Divine Odame Appiah, Kwame Nkrumah University of Science and Technology, discussed a study on predictors of off-farm adaptation among smallholder farmers in the Offinso Municipality of Ghana. Noting that most adaptation measures adopted by farmers, such as falling back on savings or increasing food stocks, were found to be "weak," he called for adaptation programmes to be mindful of ensuring medium to long-term livelihood security and biodiversity protection.

In the ensuing discussions, participants highlighted, *inter alia*: issues of scale and replicability; the need to clarify what is meant by "weak" and "strong" forms of adaptation; and practical entry points to enhance existing local adaptation strategies.

CLIMATE SCIENCE AND INDIGENOUS KNOWLEDGE SYSTEMS: James Kinyangi, CCAFS, facilitated this session on Thursday afternoon.

Fassil Kebede, Environment and Forest Research Institute, Ethiopia, highlighted experiments in Ethiopia on emission-reducing farming practices, concluding, among other things, that: agroforestry promotes carbon sequestration; neem-coated urea reduces nitrous oxide emissions; and GHG emissions can be lowered through sustainable land management practices.

Joseph Bandanaa, University of Ghana, Legon, presented on cocoa farming households in Ghana considering organic practices as climate smart and livelihood enhancers. He pointed to findings which suggest that organic farmers were slightly better off than their conventional farming counterparts in terms of income and wellbeing, and that organic cocoa farmers are more resilient to the impacts of climate change.

Evans Wabwire, Catholic University of Eastern Africa, mentioned that local communities in Western Kenya have used indigenous knowledge to avoid climate-related risks including temperature increases and rainfall increases or decreases, concluding that there is a need to blend indigenous knowledge with scientific research to further adapt to climate change.

Carolyn Manei, University of Nairobi, shared findings from a paper on the integration of indigenous knowledge with ICTs in managing the risks and uncertainties of agriculture in Kajiado County, Kenya. She noted that the main media for disseminating indigenous knowledge are radio and mobile phones, due to their portability and cost-effectiveness.



Delegates participate in a discussion on 'Africa and Global Climate Change Governance since Kyoto'



Solutions Forum on 'Sustainable Development'

In the ensuing discussion, participants considered, among other issues: organic farming *vis à vis* intensification and their climate impacts; how ICTs facilitate access to markets for indigenous communities; local climate indicators that explain climate change; and the findings from age disaggregated data on the perception of ICT use in the dissemination of indigenous knowledge.

GOVERNANCE: Africa and Global Climate Change Governance since Kyoto: This session on Thursday morning was facilitated by Franklyn Lisk.

Godwell Nhamo, University of South Africa, emphasized that Africa cannot wait for a pot of money through global financial flows, and that it must start mobilizing resources domestically to combat climate change. In discussing the adoption of INDCs, Nhamo expressed concern over the delay tactics and shifting goal posts for binding climate commitments, urging that local solutions be determined by local people.

Fiona Perry, CARE International, Kenya, explained that adaptation to climate change requires flexible decision making processes that are integrated and coordinated, providing an example of Ghana's five-year planning cycles which devolve development planning to the district level, prioritizing community adaptation planning and disaster risk reduction, and then integrates them into national planning strategies.

Labintan Adeniyi-Constant, Centre of Support and Promotion for Development (CEPAD), Benin, underlined the limited capacity and deficiency of strategy and technical assistance of Africa's group of negotiators for COP 21. He emphasized that African countries should learn from their neighbors and that high levels of transparency, a comprehensive domestic strategy and tracking of co-benefits are imperative to strengthen Africa's negotiating position.

Kennedy Mbeva, African Centre for Technology Studies, highlighted the changing landscape of negotiations and the need to explore different platforms for climate negotiations beyond the UNFCCC. He identified the role of international trade agreements and regional economic communities in Africa as important platforms to advance climate change solutions in Africa.

In discussion, participants stressed the need to identify "champions" from Africa who can strongly articulate Africa's priorities at COP 21.

SUSTAINABLE DEVELOPMENT: This session on Friday morning was moderated by Ruth Mitei, CARE International.

Annaka Peterson Carvalho, Oxfam, highlighted the substantial international and domestic resources being mobilized for climate adaptation and the need to, among other things, assess how funds are being used, whether they are

meeting the needs of the most vulnerable, and what is being done to improve accountability to build adaptive capacity and resilience.

Carvalho noted, *inter alia*, limited participation in the design of vulnerability assessments, projects that do not respond to local needs, weak horizontal and vertical coordination between agencies, and the time lag between carrying out assessments to the implementation of decisions. She urged strengthening domestic accountability processes and engaging local communities throughout the adaptation programming life cycle.

Bill Siemering, Developing Radio Partners, USA, began with a short video illustrating how community radio across Africa can engage farmers and youth to disseminate information, share knowledge, and break down the complex issues of climate change to the community. He highlighted key challenges which need to be considered in enhancing the utility of community radio for climate change awareness including the lack of resources and training to produce high quality programmes and often unpaid volunteers who do not have basic journalism training.

Yassin Mkwizu, University of Dar es Salaam, stressed that information needs to be both available and accessible to policy makers and climate planners to promote climate-smart development. He noted the need to visualize the intangible elements of climate change information at the physical, social and intellectual levels through the technique of "storytelling presentations."

In discussion, participants raised, among other issues, the sustainability of climate adaptation funds once projects expire, the continued earmarking of climate adaptation funding when results fall short of expectations, and the role of SIDS in climate adaptation both in terms of finance and information dissemination.

CLIMATE DATA FOR DECISION MAKING: This session on Friday morning was facilitated by Gille Ogadanga Ndiaye, AUC.

Dawn Mahlobo, South African Weather Service, presented on the effect of climate change on solar power generation. Noting that large-scale cloud formation can affect short wave radiation penetration through the atmosphere, she said increasing GHGs could present opportunities or threats. Mahlobo reported that preliminary results of her study of the circulation of the Hadley Cell over South Africa confirm that it is characterized by a downward mass stream resulting in less cloud formation and potentially more sun radiation and energy production, and that this system is strengthening with climate change.

Elisha Moyo reported on physical mechanisms driving rainfall systems and seasonal rainfall prediction in Southern Africa. He noted the Brandon Marion Index as one of the key systems influencing rainfall and that the tropical Indian Ocean

waters are warming faster than the subtropical sea surface temperatures resulting in an “anticipated” rainfall deficit over southeastern African countries. He concluded that more research is needed on expected longer-term changes in rainfall.

In the ensuing discussion, participants highlighted the importance of including other data sets to complement results; the issue of variability; and the use of the index for Seasonal Forecasting. On the interface of policy and science, they addressed the need to: bridge the communication gaps between scientists, policy makers and practitioners; go beyond the discussion on the lack of investment in hard science, including climate science; ensure science is coordinated, responds to needs and is policy oriented; and collect and build on existing data and knowledge, including indigenous knowledge.

The discussions also highlighted the need for communicating science results so that policy makers can use them, highlighting the importance of national and regional forums and platforms, such as the African Climate Research for Development (CR4D) platform under ClimDev-Africa.

GENDER: This session took place on Friday morning and was facilitated by Thokozile Ruzvidzo, ECA.

Nana Ama Browne Klutse, Ghana Atomic Energy Commission, reported on pilot projects aiming at incorporating gender-sensitive actions into Ghana’s health sector. She highlighted gender-sensitive actions such as: distributing adequate medicines to pregnant women and children who are most vulnerable to malaria; paying special attention to mothers and children who are accompanied by fathers to postnatal care to encourage male participation; and proposing father-to-father and mother-to-mother support groups. Noting existing gaps, she called for more attention to public education for health programmes through the media, including radios and television, house-to-house education, public gatherings and community health shows.

The ensuing discussion addressed the need to: develop a body of knowledge and make it accessible; contextualize and provide evidence of the relationship between climate change, health and gender impacts; use statistics and indicators, including working with statistical systems to define the gender indicators needed; and use different modes of communication, respecting communities’ preferences.

CLOSING OF THE MEETING

REPORTING BACK ON PRE-CONFERENCE AND

SIDE EVENTS: Johnson Nkem, ECA, chaired this session on Friday afternoon, and presented the findings from CCDA-V’s pre-conference events and side-events. Bill Siemering reported on the potential of green radio stations for promoting climate awareness across Africa and welcomed interested participants

to collaborate. Richard Anyah, University of Connecticut, reported on key findings from the pre-event on the CR4D platform stressing that the CR4D must be a collaborative institutional platform that serves as a clearinghouse for donor agencies, academia, government agencies, meteorological services and research councils to integrate Africa-centered data and share knowledge.

Selam Kidane Abebe reported on the pre-conference event on Strengthening Regional Capacity for Climate Services in Africa, highlighting that Africa is pushing for a global goal on adaptation, but that its inclusion in a Paris package deal still needs to be agreed, together with other elements, such as loss and damage, means of implementation and a legal obligation for finance for developing countries.

Hamzat Lawal, AYICC, Nigeria, reported on the Africa Youth Conference on Climate Change (AfriYOCC) pre-conference event, which involved a High level session, panel sessions, group discussions and plenary sessions, as well as capacity building workshops on agriculture, renewable energy and campaign skills.

Stressing that Africa needs to have one voice in Paris, Mithika Mwenda presented key messages from the PACJA pre-conference event. He called on negotiators to be cautious about engaging in peripheral discussions on loss and damage among others, which, he said, detract from the main task of negotiating for a strong agreement for Africa. Mwenda announced a plan to petition the AU President and the Chair of the Conference of African Heads of States on Climate Change to recall the African Co-Chair of the ADP for not adequately representing the continent.

James Hansen, CCAFS, reported the key messages of a pre-conference event focusing on strengthening regional capacity for climate services in Africa, which included the need to strengthen national meteorological services and communication of climate information for African farmers.

Delegates then viewed a video on pre-conference activities organized by the youth.

CLOSING: In the closing plenary chaired by James Murombedzi, ECA, Fatima Denton summarized key messages and outcomes from the conference including that: INDCs in Africa must speak to national development priorities; adaptation is crucial but Africa should not underestimate opportunities for mitigation in forestry, transport and agriculture; and Africans must be candid in assessing institutional and financial readiness for the development transformations necessary for climate adaptation and mitigation.



Panelists during the closing plenary

Noting that CCDA-V has built on Africa's momentum to concretize its positions for Paris, Justus Kabyemera highlighted key messages from the conference, including; the importance of emphasizing a clear differentiation between the responsibilities of developed and developing countries; the need to find a balance between mitigation and adaptation in the Paris agreement; and the need for more ambitious goals than those expressed in the INDCs.

Almami Dampha expressed his satisfaction with the conference outcomes, thanking participants for their efforts in preparing Africa's message for Paris and called for applying lessons learned to implementation at national and regional levels. On behalf of the AUC, he thanked the Government of Zimbabwe, the CCDA-V organizing committee, the ClimDev-Africa partners, participants and the media for the success of the conference.

Denton delivered a vote of thanks to development partners, the Government of Zimbabwe, the ACPC, the AfDB, the AUC and all participants for their contributions in preparing for COP 21.

Edward Samuriwo provided closing statements on behalf of Oppah Muchinguri-Kashiri, highlighting some of the messages from the conference to bring to COP 21 and beyond, stating that the conference had achieved what it set out to deliver. Looking forward to COP 21 in Paris and CCDA-VI, Samuriwo closed the meeting at 6:36 pm.

UPCOMING MEETINGS

African Economic Conference: The theme for the 2015 African Economic Conference is 'Addressing Poverty and Inequality in the post-2015 development agenda'. The Conference will bring together policy-makers, researchers, and development practitioners from Africa and around the world to make a strategic contribution to the implementation of Africa's vision and the identification of concrete actions necessary for poverty and inequality reduction in the context of the post-2015 development agenda. **dates:** 2-4 November 2015 **location:** Kinshasa, Democratic Republic of Congo **phone:** +251-11-544-5000 **fax:** +251-11-551-4416 **www:** <http://www.uneca.org/aec2015>

6th Global Initiative WACAF Regional Conference: The Global Initiative for West, Central and Southern Africa (GI WACAF Project) will hold its 6th biennial Regional Conference to bring together government and industry stakeholders from 22 African countries to discuss preparedness and response systems for oil and gas spills. The Conference will discuss challenges in the region to oil spill preparedness and response, exchange information and lessons learned, review progress achieved in GI WACAF since the 5th Conference held in November 2013 in Namibia, and determine priority actions for the 2016-2017 biennium to strengthen oil spill response capability in the region. **dates:** 16-19 November 2015 **location:** Accra, Ghana **contact:** Anton Rhodes, GI WACAF Project Manager **email:** anton.rhodes@ipieca.org **www:** <http://epaoilandgas.org/giwacaf%20.html>

UNFCCC COP 21: COP 21 and associated meetings will take place in Paris. **dates:** 30 November - 11 December 2015 **location:** Paris, France **contact:** UNFCCC Secretariat **phone:** +49-228-815-1000 **fax:** +49-228-815-1999 **email:** secretariat@unfccc.int **www:** <http://www.unfccc.int>

Africa Pavilion at COP 21: The Africa Pavilion at COP 21, which will be hosted by the ClimDev-Africa partners, will seek to continue discussions on the implications of climate

change for Africa's development, focusing on the ways in which the post-2015 climate agenda will intersect with Africa's development agenda, exploring the challenges and opportunities for Africa, and sharing information on research, innovations, and adaptation responses. **date:** 30 November - 11 December 2015 **location:** Paris, France **contact:** ClimDev-Africa **email:** info@climdev-africa.org **www:** http://www.climdev-africa.org/cop21/african_pavilion

Senior Experts Dialogue (SED-2015) on Science, Technology, and Innovation (ST&I): ECA and the National Commission for Science, Technology and Innovation of the Republic of Kenya will be organizing the second ECA-initiated Senior Experts Dialogue (SED-2015) on Science, Technology, and Innovation (ST&I) on the theme "Innovation Hubs, Clusters and Parks and Africa's Transformation." The objective of the Dialogue is to provide a forum for learning and experience sharing amongst African experts. The forum is expected to contribute to the articulation of policies that will support Africa's growth and transformational trajectory with science, technology and innovation constituting principal pillars. **dates:** 2-4 December 2015 **location:** Nairobi, Kenya **contact:** Victor Konde **email:** vkonde@uneca.org **phone:** +251-11-544-3654 **www:** <http://www.uneca.org/sed-2015>

African Forestry and Wildlife Commission – 20th Session: The Food and Agriculture Organization (FAO) of the UN will convene this meeting in order to bring together forestry experts and decision-makers from the region. The event is one of six region-specific meetings held every two years in support of the FAO Regional Forestry Commissions. **dates:** 1-5 February 2016 **location:** TBC **contact:** Foday Bojang **email:** foday.bojang@fao.org **www:** <http://www.fao.org/forestry/afwc/en/>

GLOSSARY

ACT!	Africa Climate Talks
AfDB	African Development Bank
AGN	African Group of Negotiators
AR5	Fifth Assessment Report of the IPCC
AUC	African Union Commission
CBDR	common but differentiated responsibilities
CCDA	Conference on Climate Change and Development in Africa
ClimDev-Africa	Climate for Development in Africa
COP	Conference of the Parties
ECA	United Nations Economic Commission for Africa
GHGs	greenhouse gases
INDCs	intended nationally determined contributions
IPCC	Intergovernmental Panel on Climate Change
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
SDGs	Sustainable Development Goals
SEI	Stockholm Environment Institute
SIDS	small island developing States
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change