



African Forest Forum

A platform for stakeholders in African forestry



Overview of achievements of the African Forests, People and Climate Change project

Phase I: 1 Nov. 2011 to 31 December 2014

Phase II: 1 January 2015 to 31 December 2017

Funded by the Swiss Agency for Development and Cooperation (SDC)



About AFF

Established in 2007 as a non-political, non-governmental, objective, independent and not for profit international organisation, the African Forest Forum (AFF) is an association of individuals with a commitment to the sustainable management, wise use and conservation of Africa's forest and tree resources for the socio-economic well-being of its peoples and for the stability and improvement of its environment.

AFF exists to voice the concerns of African forestry stakeholders, and to use science, indigenous knowledge, and experience to advocate for the increasing relevance of forests and trees outside forests to peoples' livelihoods, national economies and the stability of the environment.

In this regard, AFF provides independent analysis and advice to national, regional and international institutions and actors on how economic, food security and environmental issues can be addressed through the sustainable management of forests and trees outside forests. Operationally, AFF mobilises resources to address forestry and related issues that cut across countries and different African sub-regions with a view of enhancing the relevance and contribution of forests and trees outside forests to the livelihoods of the people of Africa and stability of their environment.

Vision

The leading forum that unites all stakeholders in African forestry

Mission

To contribute to the improvement of the livelihoods of the people of Africa and the environment they live in through the sustainable management and use of tree and forest resources on the African continent.

Cover photos: Makungu Seedlings and Clonal Central Nursery owned by Green Resources Ltd- Mufindi District, Tanzania (credit: Prof. Reuben J.L Mwamakimbullah, President- Tanzania Association of Foresters); private commercial plantation in Somanya, a district in the Eastern region of Ghana (photo © African Forest Forum); women smallholder farmers in Kenya (credit: McKay Savage/Wikimedia Commons).

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Report submitted to the 2nd meeting of the AFF Members Forum
held from 27 February to 3 March 2017

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1.0 INTRODUCTION

Climate change is now recognized as a major threat to achieving the poverty reduction aspirations of many African countries as well as the attainment of the Sustainable Development Goals (SDGs). Climate change is affecting rainfall patterns, water availability, sea levels, increasing droughts and bushfire frequency, increasingly impacting on human health, agriculture productivity and biodiversity. In this way climate change will adversely affect livelihoods of many people, incomes of nations and the environment people live in.

While forests are affected by climate change, they also play a key role in adaptation to climate change, for example, by increasing the resilience of rural communities. Forests support species to adapt to changing climate patterns and sudden climate events by providing refuge and migration corridors. Also, they indirectly support economies to adapt to climate change by reducing the costs of climate-related negative impacts. Forest ecosystems also provide goods and services during extreme events (droughts and floods) and are key assets for reducing vulnerability to the effects of climate change. Even better known is the role forests have in climate change mitigation. An estimated 17.4% of global GHG emissions are derived from the forest sector from deforestation and forest degradation. Forests also have considerable potential to sequester carbon. This can be achieved through afforestation, reforestation, forest restoration and changes to forest management practices, as well as substitution of forest products for fossil fuels or products requiring fossil fuels in their production. This has been fully appreciated by the ongoing global climate change negotiations.

The contribution of forests to climate change has been recognized as a cornerstone of the post-2012 climate change agenda with the decision on Reducing Emissions from Deforestation and forest Degradation (REDD+) in COP-16 in Cancun. Developing appropriate adaptation and mitigation actions include the improvement of forest management to reduce vulnerability and to mitigate GHG through REDD+.

Sub-Saharan Africa is expected to face significant impacts from climate change, both on economies and the social systems. Forests and trees can play a crucial role in helping to adapt to climate change and mitigate greenhouse gases from the atmosphere. Strengthening and further developing the forest / climate nexus therefore is a key issue for Africa's future development.

As a contribution to the various efforts in addressing issues of climate change and variability, the African Forest Forum conducted some baseline studies in 2011 to understand better how climate change effects are manifesting in forestry. Also, in 2011 AFF published a book on "Climate change and forest and wildlife resources in Africa" that summarized all scientific information the institution could gather and related to these resources in a climate change context on the continent. All these efforts facilitated the initiation of a Climate Change Programme within the institution.

The African Forest Forum Climate Change Programme (AFF-CCP) is still being strengthened to incorporate new developments in climate change. The overall objective of the AFF-CCP is to enhance the role of African forestry to help the people to adapt to the effects of climate change in various landscapes in ways that will improve livelihoods, sustain biodiversity and the quality of the environment, as well as to strengthen the capacity of Africa's forests to adapt to climate change and to contribute to mitigation efforts. This will be achieved by strengthening of the AFF in ways that foster an independent and objective analysis of related issues, promote

capacity building and advocacy and offer advice on all relevant policy and technical issues in forests and climate change.

The purpose of the AFF's Climate Change Programme is to better understand how forests and trees, and the people who depend on them in the various African landscapes, respond to climate change and variability. It is in the context of the AFF-CCP that all work on climate change at AFF is conceived. In this regard the Swiss Agency for Development and Cooperation (SDC) has supported AFF in developing both the programme and initial projects of the programme. The project reported in this document "African forests, people and climate change" has been implemented in two phases: 2011-2014 and 2015-2017.

1.1 IMPLEMENTATION

1.1.1 Project coordination

The project is executed by the AFF Secretariat through project management staff including a Senior Programme Officer who is the Programme Manager and a Programme Officer who are responsible for managing the daily activities of the project. The Knowledge Management, Communications, and the Planning, Monitoring, Evaluation and Reporting specialists also contribute to the implementation of the project. The governance of the project is facilitated by a Project Steering & Advisory Committee (PSAC) which provides strategic guidance, scientific quality assurance, as well as financial oversight, ensuring that project implementation stays on course. The Finance and Administration Unit supports the project with logistics and financing arrangements.

In executing this project, AFF seeks to create capacities of stakeholders to strengthen the role of Africa's forests and trees to adapt to climate change and mitigate its adverse effects in various landscapes in ways that will enhance livelihoods, sustain biodiversity and improve the quality of the environment. It also seeks to enhance the capacity of forest and tree resources in responding to the adverse effects of climate change.

1.1.2 Partnerships

During the project implementation, AFF Secretariat establishes partnership with some national, sub-regional and regional institutions in Africa, as well as with some partners from outside the continent. The collaboration with these institutions has helped in achieving some of the results of the project. Some activities in this project supported postgraduate students' research in several institutions as part of implementing the project activities with these institutions. This resulted into capacity building for the students, the institutions where they are studying as well as those institutions that will employ them.

In this regard, AFF developed and signed memorandum of understanding with the following institutions: (i) University of Nairobi, Kenya (ii) Maasai Mara University, Kenya; (iii) Jomo Kenyatta University of Agriculture and Technology, Kenya; (iv) Addis Ababa University, Ethiopia; (v) University of Bahri, Sudan; (vi) Sokoine University of Agriculture, Tanzania; (vii) University of Maradi, Niger; (viii) University of Free State, South Africa; (ix) Lilongwe University of Agriculture, Malawi; (x) University of Antananarivo, Madagascar; (xi) University of Ouagadougou, Burkina Faso and (xii) Hawassa University, Ethiopia. Fourteen (14) students are sponsored at masters and Ph.D. levels (list of students in Annex).

In funding some of the activities, synergy is developed with the Sida funded project on "Strengthening Sustainable Forest Management in Africa".

1.1.3 Budget and expenditure

This programme has implemented this project in two phases, with phase 1 implemented between 2011 and 2014 with a grant of Swiss Francs 3.8 million. Phase 2 was implemented between 2015 and 2017 with a grant of Swiss Francs 5 million.

The expenditure per sub-region is presented as follows in percentage of total amount: West Africa (40%); Eastern Africa (25%); Southern Africa (22%); Central Africa (13%).

2.0 PROJECT HIGHLIGHTS FOR PHASE I AND PHASE II

The achievements made in this period are highlighted in terms of outputs in the following sections. However, there are other two documents that will also address achievements of this programme. One document will demonstrate how the information from this work has been shared, and the second document will show how these outputs have been taken up by various stakeholders and how they are being used.

So, this report will confine itself to only presenting the outputs while their sharing, uptake and use will be presented separately.

2.1 PHASE 1: 1 NOVEMBER 2011 TO 31 DECEMBER 2014

2.1.1 Objectives, outcomes and outputs in each objective

The programmatic support to the African Forest Forum through project focused on the following three working areas: (i) Policy and advocacy; (ii) Capacity building and skills development; and (iii) Learning, knowledge generation and information management.

Three specific objectives were formulated for these working areas as namely:

Objective 1: Policy and Advocacy – to foster awareness on forests and climate change issues and promote appropriate changes in policies and practices. (Working area 1);

Objective 2: Capacity Building and Skills Development – to build and improve capacity to address forest related climate change issues. (Working area 2);

Objective 3: Learning, Information Generation and Knowledge Management – to ensure that production, adaptation, mitigation and policy processes involving forests and trees are backed by sound information (working area 3).

The followings are the expected outcomes and outputs associated with each objective:

Objective 1: Policy and Advocacy – to foster awareness on forests and climate change issues and promote appropriate changes in policies and practices. (Working area 1);

Outcome 1.1. Profile of the forest sector relative to other sectors of the economy in response to the challenges of climate change raised.

- Output 1.1.1. Forestry input into relevant policies of other sectors enhanced
- Output 1.1.2. Political commitment, policies and other factors shaping the evolution of the three Fs (food, fuel and fibre) in a changing climate better understood and profiled to appropriate audiences
- Output 1.1.3. Countries preparing forest related NAMAs and other plans and programs provided with relevant technical assistance

Outcome 1.2. Forest governance and equitable trade practices related to climate change improved

- Output 1.2.1. Capacities of public forestry administrations in dealing with climate change issues assessed and profiled to appropriate audiences
- Output 1.2.2. Inter-regional trade in forest products better understood (especially in terms of possible leakages) and profiled to appropriate audiences
- Output 1.2.3. Measures to improve livelihoods and rights of key stakeholders including women, youth and vulnerable groups in forest-related climate change programmes identified and profiled to appropriate audiences.

Objective 2: Capacity Building and Skills Development – to build and improve capacity to address forest related climate change issues. (Working area 2)

Outcome 2.1. Capacity of African country delegates in regional and international negotiations related to forestry and climate change strengthened.

- Output 2.1.1. African input into international negotiations is recognized and influence forest and climate change policies and decisions.
- Output 2.1.2. African capacity to internalize decisions from international processes on forests and climate change into national plans and programmes enhanced
- Output 2.1.3. African capacity to monitor compliance to international processes related to forests and climate change improved

Outcome 2.2. Capacity of national training, education and research institutions to address climate change as related to forests and trees strengthened

- Output 2.2.1. Understanding of climate change as related to forests and trees in training, education and research institutions enhanced
- Output 2.2.2. Networking and coordination among and within institutions improved, especially in generating information and sharing knowledge.

Outcome 2.3. Capacity of civil society organizations and local communities to address climate change as related to forests and trees strengthened

- Output 2.3.1. The extension service delivery of training, education and research institutions to civil society and local communities improved
- Output 2.3.2. Relevant civil society organizations and local communities have skills to address and monitor climate change issues, including vulnerability and carbon assessment

Objective 3: Learning, Information Generation and Knowledge Management – to ensure that production, adaptation, mitigation and policy processes involving forests and trees are backed by sound information (Working area 3).

Outcome 3.1. Impacts and responses to climate change and climate variability on forest

and trees and the people who depend on them assessed.

- Output 3.1.1. Climate vulnerability of biophysical and socio-economic systems related to the different African forest types analyzed, documented and shared
- Output 3.1.2. Best REDD+ practices identified and approaches to upscale them evaluated
- Output 3.1.3. Information on forest and trees resources available and how it changes over time

Outcome 3.2. Scope, potential and implementation of mitigation activities evaluated

- Output 3.2.1. REDD+ strategies applied in the various African landscapes documented and shared
- Output 3.2.2. Best REDD+ practices identified and approaches to upscale them evaluated
- Output 3.2.3. Other relevant mitigation activities identified, analyzed, documented and shared

Outcome 3.3. Experiences and technologies in the restoration of degraded woodlands and dry lands assessed

- Output 3.3.1. In selected areas, local experiences in restoring degraded forest and woodland areas assessed, documented and shared
- Output 3.3.2. Best technologies identified, documented and shared, and their potential for up scaling evaluated

Outcome 3.4. Understanding the evolving linkage between biofuel, food and fibre production, including substitutes, and climate change in the woodlands, savannah and the Sahel belt.

- Output 3.4.1. Extent and potential for sustainable production of new and emerging biofuels analyzed and documented
- Output 3.4.2. Implications of the production of the three Fs on carbon sequestration and production of forest products analyzed documented and shared

3.1.2 Highlights of key achievements of Phase I

The following are key achievements/outputs made in each of the working areas:

3.1.2.1 Working Area 1: Policy and Advocacy

All set targets in WA1 (Policy and Advocacy) for raising the profile of the forest sector relative to other sectors of the economy to the challenges of climate change were achieved. Specifically:

- Enhanced the profile of the forestry sector in socio-economic development and its role in containing adverse effects of climate change through in-depth studies undertaken and information shared using different communication platforms. Specifically, the studies carried out on relevant initiatives and policies at national, regional and global levels, such as national forestry programmes (NFPs), Nationally Appropriate Mitigation Actions (NAMAs), National Adaptation Programmes of Action (NAPAs), Great Green Wall for the Sahara and the Sahel Initiative (GGWSSI), climate change strategies and inputs into regional economic groups (RECs) generated useful information and knowledge that has continued to ignite discourses on forest based policy and advocacy in Africa;
- Strengthened better understanding on forest governance and equitable trade practices related to climate change in Africa. This was achieved through the studies in

Southern Africa, Eastern Africa, Central Africa and West Africa including various RECs such as ECOWAS, COMIFAC, EAC and COMESA. These study areas and RECs provided a good understanding on the role of forests in climate change, livelihood improvement, contribution to national incomes, institutional and other governance arrangements, and other opportunities needed to better manage the forestry resources. For example, policy briefs developed reported that African regions and government states need to look for ways of getting their countries to collaborate in managing shared forest ecosystems. This could result to crafting imaginative 'big ideas' to galvanize political support and sourcing funding to initiate relevant programmes and actions.

- Improved information access to African forestry stakeholders fostering awareness on forests and climate change issues as well as promoting appropriate changes in policies and practices in Africa. In this regard, knowledge products developed such as AFF Working Paper Series, articles/papers in special issue, the International Forestry Review: Climate change and forestry in Africa (Vol.17(S3), 2015); policy briefs; and factsheets (Annex 1) are widely disseminated through AFF websites, workshops, scientific conferences and seminars among others communication pathways that increases access to knowledge to inform forest policy and paradigm shift on forest management in the context of climate change;

Overall, the WA1 provided key opportunities for AFF to explore. Some of these included:

- focusing on gender profiling in the various activities and workshops so as to enable women feature more in forestry issues given that the forestry profession is currently dominated by their male counterparts, and this could result to inadequate representation of gender issues;
- capacity building in forest governance and its inclusion in forestry training curricula as well as improving forest governance by including primary stakeholders in the management of local forest resources;
- engaging COMESA to have timber and NTFP traders use the official channels for trade and improve relevant information sharing, organize trade education campaigns including use of trade tools such as the Simplified Trade Regime (STR), Simplified Customs Documents (SCD) in order to normalize trade in timber and NTFPs; and expanding the AFF climate change project into a programme that covers more related issues.
- The assessments of the state of forestry in plans and policies revealed that most countries are still at initial stages with preparations of NAPAs, NAMAS and REDD+. NGOs play key roles in this work while central governments have only very limited capacities. The assessments also found that there is significant scope to raise the understanding of the forests-climate change nexus and subsequently the profile of forestry in relevant plans and policies. Gender and social equity issues are reported to usually be included in plans and policies pertaining to climate change.

3.1.2.2 Working Area 2: Capacity Building and Skills Development

Working area 2 (Capacity Building and Skills Development) focused on building and strengthening capacity and developing skills for national training, education and research institutions, as well as for civil society and local communities, to address climate change as related to forests and trees through various studies. The following are achievements from the studies:

- Identified the need for creating a forest lead agency in Africa that will be responsible for developing a monitoring and evaluation system that will track progress on implementation of multilateral environmental agreements (MEAs) as part of tracking progress and reporting on the implementation of national forest programmes, including mainstreaming of relevant MEAs.
- Identified training and research needs for the forestry sector in relation to climate change. These were identified by researchers in agriculture, forestry training and research institutions as well as civil society organizations in Sub-Saharan Africa. Specifically, the training needs identified for professional, technical and informal groups were:
 - basic science of climate change.
 - forests and climate change adaptation.
 - forests and climate change mitigation; and
 - carbon markets and trade.
- The identified needs facilitated the development of training modules (http://www.afforum.org/sites/default/files/English/English_103.pdf) for each of the target groups, and these were first validated in two regional workshops (one for Anglophone and another for francophone countries in SSA), and then distributed widely using different platforms to relevant stakeholders in Africa. In order to address some of the training gaps, AFF was requested by the African forestry fraternity, during the development of the modules, to facilitate the provision of specialized trainings on rapid carbon stock appraisal (RaCSA) that focused on:
 - concepts of payment of ecosystem/environmental services (PES).
 - principles and concepts of carbon trade and marketing.
 - financing processes and agreements on carbon trade and marketing and benefit sharing mechanisms; introduction to components and formats of Project Idea Note (PIN) and Project Design Document (PDD).
 - an overview of measurement, reporting and verification (MRV) of carbon stocks, principles and practices; and
 - field work on MRV.
- Trained 357 trainers and other practitioners during trainings conducted in 10 countries, namely: Ethiopia, Zambia, Niger, Tanzania, Republic of Sudan, Zimbabwe, Kenya, Burkina Faso, Togo and Nigeria. Similarly, four regional training workshops to better re-tool university and technical college lecturers and researchers, as well as staff from extension and civil society organizations, in key areas of science and practice of climate change in relation to forests were conducted for Anglophone (Ghana and Tanzania) and francophone (Burkina Faso and Cameroun) countries. The trainings addressed issues of adaptation, mitigation, carbon assessment and trading and payments for ecosystem services (PES) as related to forestry. The modules are now widely used by professional, technical, and informal groups (including NGOs and local communities) in Sub-Sahara African countries to address issues of adaptation, mitigation and forest carbon trade. The trainers form the pioneer groups in offering such training in their own countries, as well as undertaking these assessments for their institutions and other stakeholders in forest carbon. By training staff from NGOs, government extension services and related institutions that work with local communities, AFF has ensured that this training reaches local communities through such actors.

Activities conducted under outcomes 1 and 2 have contributed to raise the profile of the

forestry sector in addressing climate change in comparison to other sectors. The input AFF currently provides into the forest management bill for Eastern Africa or the SADC FLEGT programme contribute to this.

The interest shown by ECOWAS in AFF contributing to the implementation of its 'Convergence Plan for Sustainable Management and Utilization of Forest Ecosystems in West Africa' is equally a very relevant step and sign of recognition for AFF of its the capacities. However, the uptake of forests and climate change into policies at various levels will take time. AFF has a good knowledge on the status of forestry in various regional plans and policies and of views on the forests-climate change nexus across the continent and established good relationships and partnerships with a number of key institutions and organisations. The findings of the various analyses have been and are being shared with members and other stakeholders at a series of sub-regional workshops on climate change in forestry.

3.1.2.3 Working Area 3: Learning, Information Generation and Knowledge Management
Working Area 3 (Learning, Information Generation and Knowledge Management) focused on production of sound information for climate change adaptation, mitigation and policy processes that involve forests and trees. The following are key achievements from conducted studies:

- Demonstrated with facts that the impact of climate change in the different forest types is evident. This ultimately has the potential to change traditional custodianship of natural resources, frustrate prospect of sustainable natural resource uses, put the livelihoods of people at risk, and to impact availability of water, food security and biodiversity and other sectors of the economy in Africa. This is compounded by the fact that most agricultural production in Africa is rain-fed and therefore very vulnerable to climate variability that is characterized by frequent droughts and occasional floods, which at times destroy crops and livestock.
- Provided information on the status of REDD+ implementation in different forest types. Some woodlands and savanna countries are in pilot REDD+ projects, whereas mangroves on the eastern African coastline have some REDD+ projects fully developed to the point of receiving carbon payments that are being used to address local community needs. Permanent sampling plots (PSPs) with proper protocol need to be established to support the MRV system and forest monitoring/forest resource assessment under REDD+ projects; in addition to undertaking holistic forest inventories to track the impact of climate change in forestry. This will significantly be of use to most countries in Sub-Saharan Africa engaged in REDD+ and related activities because most of them were still in the Readiness phase of REDD+.
- Made recommendations on the following in order to realize the full potential of REDD+ uptake in Africa:
 - low awareness of the REDD+ mechanism.
 - inadequate and unreliable information, especially on drivers of deforestation and dynamics of forest carbon stocks.
 - weak institutional arrangements and inadequate governance reforms in the forestry sector; and
 - weak capacity to enhance local ownership and sustainability, and inadequate funding.
- Provided information on the status of 3Fs in Africa. It was revealed that many countries in Africa have initiated and contracted international companies for bio-fuel production, which is currently at different stages of development, from raw material

production to processing. Sugarcane and Jatropha are common feed stocks for bioethanol and biodiesel, respectively, in all studied countries. The region-specific crops grown for production of biofuel are sweet sorghum, castor and croton in Eastern and Southern Africa, whereas in West and Central Africa, cassava, oil palm, soybeans and sun flower are among the preferred crops. The emergence of first-generation bio-fuel industry has created various opportunities in these countries. These include creation of jobs, reduction of GHG emissions, new markets for agricultural crop surpluses, and generally enhanced economic development of rural communities. In addition, the competition between food production, primary forest protection, and land for commercial production of biofuels has encouraged encroachment on uncultivated land, and especially on woodlands and other forests, leading to deforestation and land degradation. Also, from the studies it emerged that access to primary data from various national institutions and other government sources was difficult, and at times inadequate; as well as availability of experts for conducting some specific tasks, given the paucity on the continent, of capacity and skills in this emerging area. However, the bio-fuel industry is faced with some teething challenges such as:

- inadequate attention for sustainable raw material production.
 - lack of raw material processing facilities and, where they are available, are in some cases underdeveloped.
 - how to reconcile many, often conflicting, policies and regulations from sectors linked to biofuel.
 - limited blending with fossil fuels; and
 - inadequate technical support to the rural communities who supply raw material.
- Noted an apparent serious neglect of the potential of firewood and charcoal production to be a legitimate, dynamic and fully legalized, mainstreamed, modernized activity that could be anchored on sustainable raw material provision; given that these energy products are essential for Africa’s rapidly growing population, both in rural and urban areas. Charcoal is not a fuel of history but of the African future.

The studies recommend the development of mechanisms that will facilitate AFF to work closely with national governments in this area. Also, the implementation of the activities in this Phase of the project has contributed to improving the capacity of AFF to address forest-based climate change issues in Africa. In this regard the findings derived in each of the working areas laid a foundation for further addressing climate change issues in forestry and as well as mechanisms for addressing vulnerability to climate change in ways that enhance adaptive capacity/resilience and improve livelihoods to the people. AFF is now working on these issues.

Several papers that came from phase 1 have been published as a special issue of the International Forestry Review on “Climate Change and Forestry in Africa.”

(www.cfa-international.org/international_forestry_review.php).

3.2 OVERVIEW OF PHASE II

Like for Phase I, two other documents will deal with sharing the results from this phase as well as examine how the information is taken up and used. So, this section will deal with outputs only. During this phase the project will continue to focus on strengthening the basis for policy and advocacy, capacity building and skills development; and learning, knowledge generation and information management; like in Phase 1, considering lessons learnt in Phase 1.

3.2.1 Objectives, outcomes and outputs in each objective

Two specific objectives guide the implementation of the project in this second phase, and they are to:

Objective 1: Improve knowledge and capacity of African stakeholders in managing forests and landscapes in the context of climate change.

Objective 2: Inform and contribute to the shaping of policies and initiatives relevant to forests and climate change

The following are outputs for each objective

Objective 1: Improve knowledge and capacity of African stakeholders in managing forests and landscapes in the context of climate change.

Outcome 1. African stakeholders have better knowledge and skills on climate change and relevant AFOLU issues

- Output 1.1. Improved quality and shared updated knowledge and information on climate change and climate variability in Africa
- Output 1.2. Improved understanding of trends on forest cover change and drivers of land-use change
- Output 1.3. Strengthened capacity on climate change as related to forestry at all levels

Outcome 2. African stakeholders have better understanding of vulnerability to CC and application of promising adaptation measures pertinent to AFOLU

- Output 2.1. Gender-sensitive assessment of vulnerability and impacts of climate change and variability on forests, trees and the people who depend on them
- Output 2.2. Strengthened adaptation policies and measures as they are applied, including resilience of social systems and ecosystems

Outcome 3. AFOLU based climate change mitigation interventions understood and applied by African stakeholders

- Output 3.1. Evaluated scope, potential and implementation of pertinent AFOLU mitigation activities and improved understanding thereof
- Output 3.2. Enhanced understanding of the implementation of REDD+
- Output 3.3. Enhanced understanding of the implementation of AFOLU, CDM and voluntary carbon market-oriented activities
- Output 3.4. Enhanced understanding of changes in land use in the context of 3 Fs (food, fuel, fibre) and extractive industries

Outcome 4. A better structured African forestry private sector equipped with appropriate tools to address climate change challenges

- Output 4.1. Improved knowledge on the role of African forestry private sector in response to climate change
- Output 4.2. Improved linkage of forest-based smallholders and Small and Medium Enterprises (SMEs) to green growth

Objective 2: inform and contribute to the shaping of policies and initiatives relevant to forests and climate change

Outcome 5. Profile of the forest sector raised relative to other sectors of the economy in response to the challenges of climate change.

- Output 5.1. Prepared policy makers and negotiators from Africa to international processes relating to forests and climate change
- Output 5.2. Assessed policies and measures in AFOLU relevant to forestry in African countries
- Output 5.3. Assisted countries and regional groupings in policies and other issues on the 3Fs (food, fuel, fibre) in the context of climate change.

Outcome 6. Policies and practices that integrate mitigation and adaptation in AFOLU identified, profiled and promoted by African policy makers

- Output 6.1. Better informed African Governments and sub-regional organizations on how to integrate global Agreements into forest-related climate change policies and plans.
- Output 6.2. Assisted countries and sub-regional organizations in developing carbon policy including legal framework, institutions and implementation strategy

3.2.1 Highlights of key achievements of Phase II

The following were the key achievements /outputs within two years of project implementation, i.e., 2015-2016:

Outcome 1: African stakeholders have better knowledge and skills on climate change and relevant AFOLU1 issues

- Successfully organised two days pre-XIV World Forestry Congress (WFC) workshop on September 04-05 in Durban South Africa attended by 141 delegates including all staff in the AFF Secretariat. The sponsorship was jointly undertaken from Sida and SDC funded projects. Over 38 selected papers for oral and 20 for poster presentations during the pre-congress and WFC events provided insight on African and international forestry and other emerging issues, respectively. Some of the papers are now published as a special issue of Southern Forests: a Journal of Forest Science on “forests, people and environment: some perspectives from Africa”.
- Convened a meeting of 71 African experts on 26-30 Sept. 2016 in Lomé, Togo to share knowledge and experiences that would strengthen collaboration among African stakeholders on climate change in African forestry and improving forest business and management. During this meeting information on how climate change in relation to forestry is being handled in the continent as well as strengthening partnership among various institutions were discussed.
- Developed a database of African experts working on climate change issues relevant to African forestry.
- Prepared a policy brief on forests as related to climate change for policy makers and other stakeholders in forestry.
- Updated a brief that was earlier prepared by AFF during Phase 1 on forest and climate change in Africa that focused on African forests in present and emerging

climate arrangements. It emphasized on the significance of African forests in the context of climate change and African economy; role of REDD+ and CDM in mitigation and adaptation to climate change; AFOLU mitigation and adaptation measures in Africa; inclusion of forestry into INDCs; inclusion of forests and financing into the fuel-fibre and food nexus; and partnership arrangements between public, private sector and civil societies to profile the role of forestry in response to climate change and sustainable development goals;

- Organized media event during a workshop in Lomé which brought together more than 70 participants from various organizations in Africa and provided direct interaction between journalists, forestry experts, policymakers, training institutions, private sector, NGOs and others on priority and emerging issues on sustainable forest management (SFM) and resilience to climate change by forests and trees as well as the people who depend on these resources in order to increase visibility of AFF work through various media in sub-Saharan Africa;
- Trained 143 African professionals in forestry and other related disciplines on rapid carbon stock appraisal (RaCSA) covering the following countries: Madagascar (42); Swaziland (30); Guinea Conakry (40) and Cote d'Ivoire (31). At the end of the training course, participants were expected to have gained understanding on how to develop forest carbon projects and establish basic data needed in negotiating with carbon stock markets and trade in a cost effective and time efficient manner

Outcome 2: African stakeholders have better understanding of vulnerability to climate change and application of promising adaptation measures pertinent to AFOLU

- Selected 10 postgraduate students (3 Ph.D.; 6 M.Sc. and 1 Post-doctoral) from African Universities to undertake detailed studies on impacts of climate change vulnerability of biophysical and socio-economic systems with particular emphasis on gender responsiveness and critical ecosystems. They cover the following countries: Niger, Kenya, Ethiopia, Sudan, Malawi, Nigeria and Madagascar.
- Four other postgraduate students (3 Ph.D. and 1 M.Sc.) were selected and sponsored for research fellowship to undertake in-depth studies to generate knowledge that would enhance understanding of the trends and changes in forest cover and drivers of land-use change in identified hotspots and forest types in Burkina Faso, Ethiopia, Malawi and Niger.
- Developed Memorandum of Understanding (MoUs) with each of the Universities to create a platform of further partnership beyond the grant/fellowship period in order to strengthen African capacity to undertake research in forestry and climate change. The universities covered are: (i) University of Nairobi, Kenya; (ii) Maasai Mara University, Kenya; (iii) Jomo Kenyatta University of Agriculture and Technology, Kenya; (iv) Addis Ababa University, Ethiopia; (v) University of Bahri, Sudan; (vi) Sokoine University of Agriculture, Tanzania; (vii) University of Maradi, Niger; (viii) University of Free State, South Africa; (ix) Lilongwe University of Agriculture, Malawi (x) University of Antananarivo, Madagascar; (xi) University of Ouagadougou, Burkina Faso (xii) Hawassa University, Ethiopia.
- Four African students selected, among many competing applicants, and sponsored for AFF- HAFI Fellowship Program. The aim of the AFF-HAFI Scholarship Programme is to strengthen the African Forest Forum, and more specifically to build

African capacity in forest-related policy and management in African countries by providing opportunities for young professionals from Africa to undertake master's degree studies at HAFL. Students benefiting from the scholarship are expected to become the future champions in spreading knowledge and wisdom through AFF and related institutions and networks in the long run. The students are currently undertaking masters' studies at the School of Agriculture, Forest and Food Sciences (HAFL) in Zollikofen, Switzerland which belongs to the Bern University of Applied Sciences in order to enhance African capacity on international forestry and climate change.

- Six contextualised teaching materials (compendiums) developed in a pedagogical manner namely: Basic science of climate change (3), (one each for professional, technical and informal groups); and carbon markets and trade (3), (one each for professional, technical and informal groups) in African forestry. The compendiums will be validated in 2017 before sharing them widely with education and training institutions in forestry and related areas for capacity building in the continent.
- Developed two contextualized teaching materials (compendiums) in a pedagogical manner on “international dialogues, processes and mechanisms on climate change”, initiated; one each for professional and technical groups in forestry.

Outcome 3: AFOLU based climate change mitigation interventions understood and applied by African stakeholders

The studies on AFOLU based climate change mitigation interventions conducted in Anglophone (Zimbabwe, Zambia, Tanzania, Kenya, Ethiopia, Nigeria and Ghana) and francophone (Madagascar, Democratic Republic of Congo, Cameroon, Cote d'Ivoire and Burkina Faso) Africa generated information on the following broad areas:

- implementation of REDD+.
- implementation of AFOLU, CDM and voluntary carbon market-oriented activities.
- changes in land use in the context of 3 Fs (food, fuel, fibre) and extractive industries; and
- scope, potential and implementation of pertinent AFOLU mitigation activities.

The major findings from the studies include but not limited to the following:

- Many African countries are at readiness phase of REDD+ and taking more of the REDD+ activities than in forest based CDM. The Democratic Republic of Congo (DRC) has started transiting into the investment phase since 2014 following the validation of the country's ER-PIN of Mai-Ndombe, making the country a leader of REDD+ activities in Africa.
- The determinants for the successful and sustained uptake of REDD+ include capacity building, finance, transfer of technology, safeguards, price of carbon, carbon and non-carbon benefits, governance and institutional arrangements among others.
- Overall, REDD+ process seems to be moving slowly at the national level due to many factors linked but not limited to:
 - weak and limiting capacity of implementing institutions.
 - lack of appropriate and sufficient technology to combat climate change.
 - inadequate financial resources and the ineffective use of the little that is available.
 - low carbon prices that discourage stakeholders in forest carbon investments.

Addressing these challenges in an integrated approach, REDD+ process has the opportunity to contribute in achieving some of the development goals of many African countries. The African countries need therefore to mainstream the following in REDD+ activities:

- Develop REDD+ policy to guide its implementation including benefit sharing mechanisms.
 - Invest in capacity building especially on refining national data capturing methods that will
 - provide accurate estimates of carbon emission reductions.
 - Embark on forest resource assessment that will benchmark the forest cover changes over time and emission changes for effective investment in the forest sector.
 - Provide enabling environment for the determinants of REDD+ uptake to many African countries; and
 - African government could consider developing carbon markets within the continent that will facilitate trading forest carbon emissions as a way of expanding the existing carbon markets.
- Forest-based CDM has not enjoyed meaningful success in Africa despite the many economic, social and environmental benefits that CDM afforestation and reforestation (AR) activities offer. The rationales for the current unsuccessful situation in Africa can be explained by factors such as:
- weak capacities (institutional, governance and technical);
 - complex land tenure systems.
 - financial constraints.
 - national bottle necks surrounding authorization of the AR projects in the host country.
 - forest definitions are unclear and land cover mapping does not exist in some countries.
 - low socio-political potential.
 - less attractive business climate for investors.
 - limited market access for Certified Emission Reductions credits; and
 - unstable market prices for CER credits.
- INDC represents countries' commitments to fighting climate change both on the adaptation and mitigation fronts whereas REDD+, CDM, AFOLU are in one way or the other embedded.
- AFOLU remains a crucial part of the African INDC adaptation and mitigation contributions aimed at achieving long term low carbon and climate resilient development.

The reports, journal manuscripts, policy briefs and fact sheets developed from these studies are being finalized for sharing.

Outcome 4. A better structured African forestry private sector equipped with appropriate tools to address climate change challenges

- The studies conducted in Kenya and Zimbabwe highlighted the following about how the African private forestry sector is involved in activities that are linked to climate change. They also indicated ways that could improve linking forest-based smallholders

and small and medium enterprise (SMEs) to green growth:

- The private sector is faced with the need to curb its CO₂ emissions and to invest in mitigation and adaptation. However, it has little incentive to invest in environmental services often considered as public goods.
- Although big organizations strive to make their operations more climate resilient, the small to medium enterprises (SMEs) are unable to do so because of limited resources.
- Small and medium size enterprises (SMEs) are involved in activities related to wood fuel, industrial round wood and poles, mostly as merchants.
- NGOs are more prominent in climate change activities than the business oriented private sector in forestry. This is demonstrated by the type of climate change related activities they are engaged such as: biodiversity conservation; promoting ecosystem-based adaptation strategies; promoting carbon income-based tree planting activities; development of local community-based adaptation plans; and sustainable development and community reforestation programs, among others;
- The private sector in primary, secondary and tertiary forest production are not in most cases engaged in climate change issues, even though they may be interested to invest in climate change mitigation and adaptation activities depending on their orientation to economic, social and environmental returns.
- The raw material availability in plantation forests is threatened by shortages caused by increased harvesting and decreasing resource availability over the years. However, the private sector has embarked on a drive to replant most of the neglected areas to ensure future raw material availability and the carbon emission and carbon sequestration potential is maintained or improved. There are also plans to utilize sawmill wastes to make briquettes.
- The actors in primary and secondary forest production face significant challenges in tree planting such as: supply of quality germplasm; vandalism; political interference; uncoordinated policy frameworks; illegal settlements on areas meant for supply of forest raw materials to the industry; negative publicity on some tree species such as eucalypts; perennial droughts; pests and diseases; and animal browsing among others. These factors are likely to hinder the development of primary forest production as well as climate change mitigation and adaptation efforts aimed at increasing carbon sequestration to reduce risks associated with negative impacts of climate change and climate variability.
- Illegal settlement in gazetted public forest land meant to supply raw materials for secondary forest production has resulted to significant decline in forest products. For instance, business performance, including marketing and trade practices (incl. financing, value additions, certification, links to green growth) showed that the annual production of sawmills significantly declined. Specifically, in Zimbabwe annual production of sawmills reduced from 640,581 m³ in 2009 to 450,314 m³ in 2012.
- There is overwhelming support of best practices that include integration of all land use related activities (forestry, agriculture and land management), to contribute to the mitigation of climate change in several ways. The other best practices that incentivize forest conservation include beekeeping and marketing of non-timber forest products. These promote conservation and help communities to survive under a changing

climate and climate variability; and

- Profiling the role of private sector and facilitating their development capacities to engage in primary and secondary forest production as well as in carbon trading remains crucial in the forest sector.

Outcome 5: Profile of the forest sector raised relative to other sectors of the economy in response to the challenges of climate change

The African Forest Forum Technical Support Team to Raise the Profile of Forestry (TST) was established as a committee of the Governing Council of the African Forest Forum to strategically position informed African participation in international forestry and related dialogues. The TST's role is to also facilitate negotiations on forestry and related issues in ways that promote sustainable forest management in Africa. The following have been achieved since 2012 to 2016.

- Trained 40 African delegates on negotiations skills needed during international engagement with partners in forestry and climate change. The training conducted in Mombasa, Kenya during UNFF 11 preparatory meeting resulted in the preparation of policy makers and negotiators from Africa to international processes relating to forests and climate change.
- Africa's voice in international negotiations on forest issues has become clear and more coherent leading to integration of Africa's position in the outcome documents of the United Nations Forum on Forests meetings/sessions. The common Africa positions developed for the meetings were effectively used by the African Group. For example, the proposed elements were integrated in UNFF 11 Resolution and Ministerial Declaration: the United Nations Strategic Plan for Forests 2017-2030 and Quadrennial Programme of Work 2017-2020.
- Inputs by African negotiators to the first and second meetings of the United Nations Forum on Forests (UNFF) open-ended intergovernmental ad hoc expert groups (AHEG 1&2) on United Nations Strategic Plan on Forests (UNSPF 2017- 2030) and the Quadrennial plan of work (2017-2020) to implement the international arrangement on forests were better articulated through support from the AFF Technical Support Team to Raise the Profile of Forestry (TST).
- Trained 77 forestry practitioners from 25 countries on international multilateral negotiations resulting in an increased number of competent resource persons in Africa on international negotiations.

Outcome 6. Policies and practices that integrate mitigation and adaptation in AFOLU identified, profiled and promoted by African policy makers.

Key achievements from in-depth studies for regional economic communities/groupings on policies and other issues related to the nexus food-fuel-fibre production in the context of climate change in Eastern Africa (Kenya, Tanzania, Uganda and Ethiopia); Southern Africa (Malawi, Zambia, Zimbabwe and Madagascar); West Africa and Sahel (Ghana, Nigeria, Niger and Mali); and Central Africa (Cameroon, Democratic Republic of Congo, Republic of Congo and Chad) highlighted the following:

- trends in forest cover change in selected countries of the following sub regions:

Southern Africa; West Africa; Eastern and Central Africa showed negative trend over the last two decades that need to be reversed to balance the ecosystem needs for socio-economic and sustainable development.

- The drivers of deforestation and forest degradation in the selected regions, included: agricultural expansion to supply food for the increasing population; increased extractive industry operations such as fuelwood extraction, illegal logging, mining, biofuel production etc; social and economic infrastructure; unsustainable management practices; inefficient wood to charcoal conversion technologies, among others.
- The exploration and expansion of biofuel production occurring in forested zones have potential of decreasing the capacity of the forests to provide food, fibre and fuelwood to forest dependent communities and is likely to as well compete with arable land for the cultivation of food crops. While there is increasing attention on the role of biofuel in mitigating climate change by substituting fossil fuel, the expansion of biofuel crop plantations can drive forest clearance which will culminate in more emission of greenhouse gases that contributes in changing the long term climate;
- Competition on biofuel production impacts on food production, land security and biodiversity habit significantly. In addition, the first-generation biofuels production could create and intensify tensions with indigenous and local population due to problems arising from land grabbing and local food production. For example, in Zimbabwe *Jatropha* has also been seen as a threat to agriculture, the economy and environment as the same labour is shared for its production and food production; chiefs stopped the growing of *Jatropha* and encouraged their subjects to grow maize instead.
- Competition between food production, primary forest protection and land for commercial production of biofuels has encouraged encroachment on uncultivated land, and especially woodlands and other forests leading to deforestation, loss of biodiversity and land degradation, hence more emission of GHGs.
- Bioenergy in form of firewood and charcoal will continue to dominate energy demand particularly at household levels for cooking, heating and lightning in sub-Saharan Africa. Therefore, the development of viable biofuel business should be encouraged like the case in Madagascar and Rwanda where for instance in Madagascar, the following are implemented:
 - village-based approach that places local people at the centre of planning and implementation of plantation management for sustainable charcoal production.
 - application of SFM practices in order to identify and retain production capacity in both energy wood plantations and natural forests.
 - creation of new forest resources through reforestation of degraded landscapes with secure tenure rights; improvement of the entire wood fuel value chain; and establishing the conditions for an enabling framework.
 - A village-based participatory approval process allocates individual woodlots to interested households, along with defined use rights and obligations. Each plot is demarcated, mapped, and documented with the community's approval. Technical assistance is provided by specially trained NGOs.
- Biomass energy, particularly wood fuels, are currently largely in the informal sector that requires support to structure them into viable businesses.
- National governments and development partners need to support the development

of solar energy to reduce the demand for biomass energy and consequently reduce pressure on the land and make more land available for food and fibre production.

- Institution such as AFF could partner with national governments in Africa and development agencies to spearhead and encourage communities, groups and individuals to establish agroforestry plots, woodlots and forest plantations with fast growing multipurpose energy trees on marginal, degraded or fallow lands.
- In the countries studied there is no comprehensive policy framework that could provide a vision for examining trade-offs and minimizing risks between 3Fs production objectives. This is attributed to limited information on the economic, environmental and social dimensions of current wave of biofuel crop investments, among other factors. This has translated to unclear policy visioning on how investments in the agriculture sector will deliver on biofuel and food; scale of biofuel production, balancing domestic consumption and export, process of biofuel transformation and blending.

The following action areas were recommended:

- Undertake inventory and analyses of policy, legal and institutional frameworks to evaluate their level of compliance to national, regional and global needs to tap available opportunities and respond to anticipated challenges, avoiding reactionary response;
- Develop approaches to enhance science-policy interface for greater effectiveness on 3Fs, and financing of such investments.
- Review research agenda that takes tenets of African needs in tapping global opportunities to strategically position African countries in providing response to the demands on the 3Fs.
- Invest in research to generate empirical evidence on the actual potential production, nature of competition for land with respect to production of the 3Fs.
- Promote the establishment and upscaling of plantations for biofuels production, as part of the energy mix of the countries in Africa.
- Enhance grant tenure rights to local communities, private sector for community-based biofuels production, away from government control towards decentralization and local empowerment; and
- AFF and other development-oriented regional institutions should develop mechanisms for spearheading programmes designed by major players to narrow the science-policy gap, maximize the interface between political and professionally generated information, to ensure maximum returns on investments both in terms of research and capacity building for enhanced food-fibre-fuel production.

Key challenges and constraints during implementation of the project

- Scanty availability of experts with wide knowledge and experience that span the African sub-regions and the continent.
- Plagiarism was detected from some writings by contracted experts.
- Access to reliable data by the consultants engaged in different assignment.
- Untimely delivery of reports and other assignment deliverables compelling the Secretariat to have constant follow-ups through different means of communication resulting to delays in reviewing and dissemination of the findings to the forestry stakeholders and other related players as per schedule.
- Weaknesses in the technical writing skills of some experts engaged to undertake project activities making the technical staff at Secretariat to spend a lot of time re-working on the reports and other knowledge products to meet the minimum standard before sharing widely.

- Overstretching of the technical staff at Secretariat managing and implementing the project in taking several unforeseen assignments, like in providing unexpected back up to consultants.
- Some experts did not accept AFF rates for compensation.

Mitigation measures

- Re-advertised the call for short term assignments and exploited other networks to increase the reach in order to recruit the needed experts.
- Shared as much information as possible with the experts that the Secretariat and the reviewers could avail, in order to enhance the quality of reports, papers, policy briefs and fact sheets.
- Rejected plagiarized materials and terminated contracts with associated experts.
- Raised the level of awareness on the need for good forestry data in the workshops.
- Established a team of experts to review reports submitted by consultants before sharing to independent reviewers and finalization for dissemination.

Lessons learnt

- Student engagements to undertake some studies in different project outputs has enhanced AFF profile and reach in the continent. It has also widened the scope of the stakeholders expected to consume AFF knowledge products.
- Media engagement during dissemination of study findings through workshops, conferences and other avenues proved very useful in reaching, relatively cheaply, wider audiences in and outside the continent. This is expected to change the mind-set and attitude towards forestry by the general public and other many stakeholders in African forestry.
- The components addressed by the project in each outcome remain relevant not only during the project cycle but for the foreseeable future. For example the AFOLU, REDD+, mitigation and adaptation programmes, NDCs, private sector engagement in forestry, green economy, bioenergy among others are at very infant stage in the continent, they form part of national development programmes and they would require further support;
- The introduction of harmonization methodology workshops for contracted experts working on similar issues before they engage in implementation of the contracted project activities has proved to be very valuable in controlling the quality of the work from the consultants. It also facilitates the promotion of networking among experts from different countries and sub-regions. This does not only help in harmonizing the methodology to undertake the work and present the results but also facilitates the development of a pan-African outlook on the studies.
- AFF publications in special journal issues elicited wider readership not only in Africa but also outside Africa. This needs to be applied also in this second phase of the project; and
- The engagement of AFF technical Secretariat staff by other development partners in the continents such as FAO, AUC, and universities, among others, in taking up some assignments jointly with them expanded the scope and reach of AFF's activities and consolidated existing partnership arrangements as well as creating new ones.

ANNEX 1. KNOWLEDGE PRODUCTS FROM PROJECT AND RELATED ACTIVITIES

The following is a summary of knowledge products (journal articles, working paper series, policy briefs, factsheet, book chapters, books, etc.) developed and disseminated during the five years of project implementation. The annex also includes the knowledge products under preparation.

I: Journal articles

Table 1: Published journal articles/papers

N	Title	Authors	Authors affiliation	Web access
Phase I: 1 Nov. 2011-31 Dec				
1	Forestry related input into relevant policies at the regional and global levels: an African perspective on climate change; <i>International Forestry Review, Vol. 17(S3), 2015 Special Issue: Climate Change and Forestry in Africa</i>	¹ Harrison Ochieng Kojwang and ² Larwanou Mahamane	¹ Private consultant, Windhoek, Namibia ² African Forest Forum (AFF)	http://www.afforum.org/node/65461
N	Title	Authors	Authors affiliation	Web access
Phase I: 1 Nov. 2011-31 Dec				

	An overview of the nationally appropriate mitigation actions (NAMAs) and national adaptation programmes of action (NAPAs) in Africa; <i>International Forestry Review</i> , Vol. 17(S3), 2015 <i>Special Issue: Climate Change and Forestry in</i>	¹ Harrison Ochieng Kojwang and ² Larwanou Mahamane	¹ Private consultant, Windhoek, Namibia ² African Forest Forum (AFF)	http://www.afforum.org/node/65462
3	A review of public forests administrations for interventions in climate change activities in the dry forest and woodland countries of Sub-Saharan Africa; <i>International Forestry Review, Vol. 17(S3)</i> .	¹ Cliff Dlamini, ² Larwanou Mahamane, Paxie Chirwa ³	¹ WWF South Africa ² African Forest Forum (AFF) ³ Forest Science Postgraduate Programme, University of Pretoria, South Africa	http://www.afforum.org/node/65457
4	A brief overview of the capacities of public forest administrations in climate change work in the moist forests countries of Sub-Saharan Africa; <i>International Forestry Review, Vol. 17(S3), 2015 Special Issue: Climate Change and Forestry in Africa</i>	¹ Cliff Dlamini, ² Larwanou Mahamane, Paxie W Chirwa ³	¹ WWF South Africa ² African Forest Forum (AFF) ³ Forest Science Postgraduate Programme, University of Pretoria, South Africa	http://www.afforum.org/node/65458
N	Title	Authors	Authors affiliation	Web access
Phase I: 1 Nov. 2011-31 Dec				

5	Climate vulnerability of biophysical systems in different forest types and coastal wetlands in Africa: A synthesis; <i>International Forestry Review, Vol. 17(S3), 2015 Special Issue: Climate Change and Forestry in</i>	¹ Kitula, R.A, ² Larwanou,M, ³ Munishi, P.T.K, ⁴ Muoghalu, J. I. and ⁵ Popoola,L	¹ University of Dar es Salaam, Institute of Marine Sciences ² African Forest Forum (AFF), Nairobi, Kenya ³ Sokoine University of Agriculture ⁴ Obafemi Awolowo University, Nigeria ⁵ Centre for Sustainable Development, University of Ibadan, Nigeria	http://www.afforum.org/node/65459
6	Climate vulnerability of socio-economic systems in different forest types and coastal wetlands in Africa: A synthesis <i>International Forestry Review, Vol. 17(S3), 2015 Special Issue: Climate Change and</i>	¹ Kitula, R.A, ² Larwanou,M, ³ Munishi, P.T.K, ⁴ Muoghalu, J. I. and ⁵ Popoola,L	¹ University of Dar es Salaam, Institute of Marine Sciences ² African Forest Forum (AFF), Nairobi, Kenya ³ Sokoine University of Agriculture ⁴ Obafemi Awolowo University, Nigeria ⁵ Centre for Sustainable Development, University of Ibadan, Nigeria	http://www.afforum.org/node/65460
7	Management and restoration practices in degraded landscapes of Eastern Africa and requirements for up-scaling. <i>International Forestry Review, Vol. 17(S3), 2015 Special Issue: Climate Change and Forestry in Africa</i>	¹ Chirwa, Paxie. W. ² Larwanou Mahamane, ³ Syampungani Stephen, ⁴ Babalola Folaranmi D.	¹ Forest Science Postgraduate Programme, University of Pretoria, South Africa ² African Forest Forum (AFF), Nairobi, Kenya ³ School of Natural Resources, Copperbelt University, Zambia ⁴ Centre for Environmental Economics and Policy in Africa, University of Pretoria, South Africa ⁵ Department of Forest resources Management, University of Ilorin, Nigeria	http://www.afforum.org/node/180727
N	Title	Authors	Authors affiliation	Web access
Phase I: 1 Nov. 2011-31 Dec				

8	<p>Management and restoration practices in degraded landscapes of Southern Africa and requirements for up-scaling; <i>International Forestry Review</i>, Vol. 17(S3), 2015 Special Issue: <i>Climate Change and Forestry in Africa</i></p>	<p>¹Chirwa, Paxie.W. ²Larwanou Mahamane, ³Syampungani Stephen, ⁴Babalola Folaranmi D.</p>	<p>¹Forest Science Postgraduate Programme, University of Pretoria, South Africa ²African Forest Forum (AFF), Nairobi, Kenya ³School of Natural Resources, Copperbelt University, Zambia ⁴Centre for Environmental Economics and Policy in Africa, University of Pretoria, South Africa</p>	<p>http://www.afforum.org/node/65456</p>
9	<p>Sustainable land management practices in the Sahel: Review of practices, techniques and technologies for land restoration and strategy for up-scaling. <i>International Forestry Review</i>, Vol. 17(S3), 2015 Special Issue: <i>Climate Change and Forestry in Africa</i></p>	<p>¹Abdou M, ²Chirwa, Paxie W. , ³Larwanou Mahamane, ^{4,5}Babalola, Folaranmi D. and ²Ofoegbu Chidieber</p>	<p>¹Coordonnateur National, Programme Grande Muraille Verte-Niger. ²Forest Science Postgraduate Programme, University of Pretoria, South Africa; African Forest Forum (AFF), Nairobi, Kenya; ⁴Centre for Environmental Economics and Policy in Africa, University of Pretoria, South Africa ⁵Department of Forest Resources Management, University of Ilorin, Nigeria</p>	<p>http://www.afforum.org/node/65454</p>
10	<p>An overview of intra-African trade in forest products: opportunities and challenges. <i>International Forestry Review</i>, Vol. 17(S3), 2015 Special Issue: <i>Climate Change and Forestry in Africa</i></p>	<p>M.E. Chipeta¹ and G. Kowero²</p>	<p>¹Policy Analyst, Imperial Park, Limbe, Malawi ²Executive Secretary, African Forest Forum [AFF], Nairobi, Kenya.</p>	<p>http://www.afforum.org/node/65463</p>

No	Title	Authors	Author Affiliation	Web access
Phase I: 1 Nov. 2011-31 Dec				
11	Market potential of non-wood forest products in the Sahelian countries; International Forestry Review, Vol. 17(S3), 2015 Special Issue: Climate Change and Forestry in Africa International Forestry Review, Vol. 17(S3), 2015 Special Issue: Climate Change	¹ Abdou M and ² Larwanou Mahamane	¹ Coordonnateur National, Programme Grande Muraille Verte-Niger. ² African Forest Forum (AFF), Nairobi, Kenya	http://www.afforum.org/node/65464
12	Biofuel Initiatives in West Africa and the Sahel: Potential for Success. <i>International Forestry Review, Vol. 17(S3), 2015 Special Issue: Climate Change and Forestry in Africa</i>	¹ L. Popoola, ² M. Larwanou, and S. O Jimoh ³	¹ Centre for Sustainable Development, University of Ibadan, Ibadan, Nigeria; ² African Forest Forum (AFF), Nairobi, Kenya; ³ Department of Forest Resources Management, University of Ibadan, Nigeria	http://www.afforum.org/node/65465
13	Characterization of tree stands in <i>Faidherbia albida</i> (Del) A.Chev. And <i>Prosopis Africana</i> (Guill., Perrot and Rich.) Taub. Parklands of South-central Niger; Journal of Applied Biosciences 94:8890 – 8906; J.Appl. Biosci. 2015	¹ Massaou dou Moussa, ² Larwanou Mahamane et ³ Mahama ne Saadou	¹ Département de Gestion des Ressources Naturelles (DGRN), Institut National de la Recherche Agronomique du Niger (INRAN), BP 240 Maradi, Niger. E-mail: massaoudmoussa@yahoo.fr ² African Forest Forum (AFF) C/o World Agroforestry Center (ICRAF), P.O. Box 30677– 00100, Nairobi, Kenya. E-mail: m.larwanou@cgiar.org ³ Department of Biology, Faculty of Science, University Abdou Moumouni de Niamey, Niamey, Niger	www.m.elewa.orgon 31st October 2015 http://dx.doi.org/10.4314/jab.v94i1.6
14	Resilience to stress of woody species in <i>Faidherbia albida</i>	Moussa Massaou dou ^{1*} Larwanou	¹ Department of Natural Resources Management (DGRN),	http://www.innspub.net

No	Title	Authors	Author Affiliation	Web access
Phase I: 1 Nov. 2011-31 Dec				
	(Del) A. Chev. and <i>Prosopis Africana</i> (Guill., Perrot and Rich.) Taub. parklands in the Sahelian Niger: <i>Journal of Biodiversity and Environmental Sciences (JBES)</i> ISSN: 2220-6663 (Print) 2222-3045 (Online) Vol. 8, No. 3, p. 107-124, 2016 ISSN: 2220-6663 (Print) 2222-3045 (Online) Vol. 8, No. 3, p. 107-124, 2016	Mahamane ² Karim Saley ³ Saadou Mahama ne	National Institute of Agricultural Research of Niger (INRAN), P.O. Box 240 Maradi, Niger ² African Forest Forum (AFF), World Agroforestry Center (ICRAF) Nairobi, Kenya ³ Department of Biology, Faculty of Science and Technology, University Dan Dicko Dankoulodo of Maradi, Niger ⁴ Department of Biology, Faculty of Science, University Abdou Moumouni of Niamey, Niger	

No	Title	Authors	Author Affiliation	Web access
Phase II: 1 Jan 2015-31 Dec 2017				
14.	Resilience to stress of woody species in <i>Faidherbia albida</i> (Del) A. Chev. and <i>Prosopis Africana</i> (Guill., Perrot and Rich.) Taub. parklands in the Sahelian Niger: <i>Journal of Biodiversity and Environmental Sciences (JBES)</i> ISSN: 2220-6663 (Print) 2222-3045 (Online) Vol. 8, No. 3, p. 107-124, 2016 ISSN: 2220-6663 (Print) 2222-3045 (Online) Vol. 8, No. 3, p.	Moussa Massaou dou ^{1*} Larwanou Mahamane ² Karim Saley ³ Saadou Mahama ne	¹ Department of Natural Resources Management (DGRN), National Institute of Agricultural Research of Niger (INRAN), P.O. Box 240 Maradi, Niger ² African Forest Forum (AFF), World Agroforestry Center (ICRAF) Nairobi, Kenya ³ Department of Biology, Faculty of Science and Technology, University Dan Dicko Dankoulodo of Maradi, Niger ⁴ Department of Biology, Faculty of Science, University Abdou Moumouni of Niamey, Niger	http://www.innspub.net;

No	Title	Authors	Author Affiliation	Web access
Phase II: 1 Jan 2015-31 Dec 2017				
	<i>107-124, 2016</i>			
15.	Allometric Equations for Biomass Estimation of Woody Species and Organic Soil Carbon Stocks of Agroforestry Systems in West African: State Of Current Knowledge; International Journal of Research in Agriculture and Forestry Volume 2, Issue 10, October 2015, PP 1-17 ISSN 2394-5907 (Print) & ISSN 2394-5915 (Online)	¹ Massaoudou Moussa ² Larwanou Mahamane ³ Mahamane Saadou	¹ Department of Natural Resources Management (DGRN), National Institute of Agricultural Research of Niger (INRAN), BP 240 Maradi, Niger ² African Forest Forum (AFF) C/o World Agroforestry Center (ICRAF), P.O. Box 30677– 00100, Nairobi, Kenya ³ Department of Biology, Faculty of Science, University Abdou Moumouni of Niamey, Niamey, Niger	http://www.ijraf.org/pdf/v2-i10/3.pdf
16.	Overview of restoration and management practices of the Sahelian and dryland forests and woodlands of East and Southern Africa Southern Forests 2017:1-8	Chirwa, Paxie. W., Larwanou Mahamane	¹ Forest Science Postgraduate Programme, Department of Plant and Soil Sciences, University of Pretoria, Pretoria, South Africa ² African Forest Forum, c/o World Agroforestry Centre (ICRAF), Nairobi, Kenya	http://www.afforum.org/node/180877 http://www.afforum.org/sites/default/files/English/English_131.pdf
17.	Restoration degraded ecosystems in the Afromontane highlands of Ethiopia: comparison of tree plantations and natural regeneration	Abraham Abiyu ¹ , Demel Teketay ² , Georg Gratzner ³	¹ Amhara Agricultural Research Institute, Bahir Dar, Ethiopia ² Department of Crop Science and Production, Botswana University of Agriculture and Natural Resources, Gaborone, Botswana ³ Institute of Forest Ecology, University of Natural Resources and Life Sciences, Vienna, Austria ⁴ Ecology, Evolution and Biodiversity Conservation Section, University of Leuven, Leuven, Belgium	http://www.afforum.org/node/180878
18.	Socio-economic factors influencing	C.Ofoegbu ^{1*} , P. W.	¹ Forest Science Postgraduate Programme, Department of Plant and	http://www.afforum.org/sites/default/files/English/English_133.pdf

No	Title	Authors	Author Affiliation	Web access
Phase II: 1 Jan 2015-31 Dec 2017				
	household dependence on forests and its implication for forest-based climate change interventions <i>Southern Forests 2017: 1-8</i>	Chirwa ¹ , J. Francis ² and F. D. Babalola ³	Soil Sciences, University of Pretoria, Pretoria, South Africa ² Institute for Rural Development, University of Venda, Thohoyandou, South Africa ³ Department of Forest Resources Management, University of Ilorin, Ilorin, Nigeria	
19.	A review of carbon dynamics and assessment methods in the miombo woodlands	Ferdinand Handavu ¹ , ^{2*} Paxie WC Chirwa ¹ and Stephen Syampungani ³ Mahama ne Larwanou ⁴	^{1,2*} Zambia Forestry College, Private Bag 1, Mwekera Kitwe, Zambia ¹ Forest Science Postgraduate Programme, Department of Plant and Soil Sciences, University of Pretoria, Pretoria, South Africa ³ Department of Environmental and Plant Sciences, Copperbelt University, P.O. Box 21692, Kitwe Zambia ⁴ African Forest Forum, c/o World Agroforestry Centre (ICRAF), Nairobi, Kenya	http://www.tandfonline.com/doi/abs/10.2989/20702620.2016.1277643
20.	Growing common plantation tree species in Kenya for sale of carbon and wood supply: What is the best bet? <i>Southern Forests, 2017, 79: 1-8</i>	Vincent O.Oeba ¹ , Larwanou Mahama ne ¹ , Samuel C.J.Otor ² , James B. Kung'u ² , Muchiri N. Mbae ³	¹ African Forest Forum, P.O. Box 30677-00100, Nairobi, Kenya ² Kenyatta University, School of Environmental Studies, Department of Environmental Sciences, P.O. Box 43844-00100, GPO Nairobi, Kenya ³ Kenya Forestry Research Institute, P.O. Box 20412-00200, Nairobi, Kenya	http://www.tandfonline.com/doi/abs/10.2989/20702620.2016.1274860
21.	The relative importance of climatic gradient versus human disturbance in determining population structure of <i>Azelia Africana</i> in the Republic of Benin	Achille E. Assogbadjo ¹ , Sylvanus Mensah ² & Romain Glèlè Kakai ²		http://www.tandfonline.com/doi/abs/10.2989/20702620.2016.1255406
22.	Evaluation of the sustainability of participatory management of forest	Kisito Gandji ¹ , Valère K. Salako ¹ , Vincent O.A.	Laboratory of Biomathematics and Forest Estimations, Faculty of Agronomic Sciences, University of Abomey-Calavi, Cotonou, Republic of Benin ² Laboratory of Biogeography and	http://afforum.org/sites/default/files/English/English_130.pdf

No	Title	Authors	Author Affiliation	Web access
Phase II: 1 Jan 2015-31 Dec 2017				
	plantations establishment: a case study from Wari-Maró Forest Reserve, Republic of Benin (West Africa) <i>Southern Forests 2017: 1-8</i>	Orékan ² , Achille E. Assogbadj ^{1,3} Romain L. Glèlè Kakai ¹ and BriceA. Sinsin ³	Environmental Expertise, Faculty of Letters, Arts and Human Sciences, University of Abomey-Calavi, Abomey-Calavi, Republic of Benin ³ Laboratory of Applied Ecology, Faculty of Agronomic Sciences, University of Abomey-Calavi, Cotonou, Republic of Benin * Corresponding author, email: gkisito@gmail.com	
23.	An assessment of the forest regeneration potential of <i>taungya</i> system of farming in Oyo State, southwestern Nigeria <i>Southern Forests 2017: 1-8</i>	Azeez, I. O.*, L. Popoola and I. O. Shulamite	Shulamite Department of Forest Resources Management, University of Ibadan, Nigeria * Corresponding author, email: ismail.azeez@mail.ui.edu.ng	http://afforum.org/sites/default/files/English/English_128.pdf
24.	The characteristics of financing arrangements for the production and marketing of shea (<i>Vitellaria paradoxa</i>) butter in Tamale in the Northern Region of Ghana;	Emmanue I Kombiok and Olivia Agbenyega*	Kwame Nkrumah University of Science and Technology, Kumasi, Ghana * Corresponding author, email: abenaafra@hotmail.com	http://afforum.org/sites/default/files/English/English_135.pdf
25.	Socio-economic factors influencing non-timber forest products' marketing in tropical lowland rainforests of southwest Nigeria	Amusa, T.O. ¹ , Jimoh, S.O. ² and Azeez, I.O. ²	Department of Forest Resources Management, University of Ilorin, Ilorin, Nigeria 2 Department of Forest Resources Management, University of Ibadan, Ibadan, Nigeria *Corresponding author, email: teejayui@gmail.com , amusa.to@unilorin.edu.ng	http://afforum.org/sites/default/files/English/English_134.pdf

No	Title	Authors	Author Affiliation	Web access
Phase II: 1 Jan 2015-31 Dec 2017				
	<i>Southern Forests 2017: 1-8</i>			
26.	Forests, people and environment: some African perspectives	¹ Chirwa PW., ² Larwanou M., ² Kowero G	¹ Forest Science Postgraduate Programme, University of Pretoria, South Africa. ² African Forest Forum, P.O. Box 30677-00100, Nairobi, Kenya	
27.	Estimation of aboveground and below ground carbon sequestration of <i>Cupressus lusitanica</i> , <i>pinus patula</i> and <i>Eucalyptus Saligna</i> plantation species in Kenya. <i>Researchjournal i's Journal of Forestry Vol.3 No.6. 2016</i>	Vincent O. Oeba., Larwanou Mahamane., Samuel C.J. Otor., James B. Kung'u., Muchiri N. Mbae	¹ African Forest Forum, P.O. Box 30677-00100, Nairobi, Kenya ² Kenyatta University, School of Environmental Studies, Department of Environmental Sciences, P.O. Box 43844-00100, GPO Nairobi, Kenya ³ Kenya Forestry Research Institute, P.O. Box 20412-00200, Nairobi, Kenya	http://www.afforum.org/sites/default/files/English/English_107.pdf
28.	Restoring Plant Succession on Degraded Crusted Soils in Niger: a Case Study Using Half Moons, Tree Seedlings and Grass Seed; <i>Volume 3, Issue 2 (9) February 2016 International Journal of Recent Research and Applied Studies (Multidisciplinary Open Access Refereed e-Journal)</i>	Idrissa Soumana 1/2*, Tougiani Abasse ¹ , John C. Weber ³ , Mahamane Larwanou ⁴ Mahamane Ali ⁵ .Mahamane Saadou	¹ Institut National de la Recherche Agronomique du Niger (INRAN), BP 429, Niamey, Niger. ² Université de Diffa, BP 78, Diffa, Niger. ³ World Agroforestry Centre, PO Box 30677-00100, Nairobi, Kenya. ⁴ African Forest Forum (AFF), c/o World Agroforestry Centre, PO Box 30677-00100, Nairobi, Kenya. ⁵ Université Abdou Moumouni de Niamey, BP 10662, Niamey, Niger.	http://www.ijrras.com/v3_i2/Paper%209.pdf
29.	Variability in growth of <i>Vachellia</i>	Mahamane Larwanou ^{1*} ,	¹ African Forest Forum, c/o World Agroforestry Center, Nairobi, Kenya.	http://www.tandfonline.com/doi/pdf/10.2989/20702620.2014.93263

No	Title	Authors	Author Affiliation	Web access
Phase II: 1 Jan 2015-31 Dec 2017				
	<i>nilotica</i> provenances tested in the Sudano-Sahelian zone of Niger; <i>Southern Forests 2014: 1-6</i>	Rabioulssa ² Mahamane Saadou ³ and Anders Ræbild ⁴	² Institut Pratique de Développement Rural, Kollo, Niger. ³ Department of Biology, Faculty of Science, University Abdou Moumouni de Niamey, Niamey, Niger; ⁴ Department of Geoscience and Natural Resources, University of Copenhagen, Frederiksberg, Denmark	
30.	Effects of fertilization and watering regimes on early growth and leaf biomass production for two food tree species in the Sahel: <i>Moringa oleifera</i> Lam. And <i>Adansonia digitata</i> L. <i>J. Agric. Sci. Appl. Volume 3, Issue 4 Dec. 2014 PP. 82- 88 DOI: 10.14511/jasa.2014.030401</i> Journal of Agricultural Science and Applications (J. Agric. Sci. Appl.)	M. Larwanou* ¹ , M. M. Adamou ² , T. Abasse ³	African Forest Forum (AFF). C/o World Agroforestry Center (ICRAF). United Nations Avenue. P.O.Box 30677 – 00100, Nairobi, Kenya ¹ Faculté d'Agronomie, Université Abdou Moumouni, B.P. 10960 Niamey, Niger. Institut National de la Recherche Agronomique du Niger. BP 429, Niamey, Niger.	http://globalimpactfactor.com/journal-of-agricultural-science-and-applications-jasa/
31.	Facteurs de pression sur les parcs agroforestiers à <i>Vitellaria paradoxa</i> et à <i>Neocarya macrophylla</i> dans le Sud-ouest du Niger (Afrique de l'Ouest) J. Appl. Biosci. 2016	Dan Guimbo Iro ^{1*} , Morou Boubé ² , Rabiou Habou ³ , Larwanou Mahaman ⁴	¹ Université Abdou Moumouni (Niger), Tel: (00227) 96461038, E-mail: danquimbo@yahoo.fr ² Université Dan Dicko Dankoulodo de Maradi (Niger) ³ Université de Diffa (Niger) ⁴ African Forest Forum (AFF), United Nations Avenue P.O. Box 30677 Nairobi - 00100, Kenya	http://m.elewa.org/Journals/wp-content/uploads/2016/1/1/6.Dan-Guimbo.pdf

No	Title	Authors	Author Affiliation	Web access
Phase II: 1 Jan 2015-31 Dec 2017				
	<i>Journal of Applied Biosciences</i> 107: 10407-10417			
32.	Uses and preferences of woody species in two protected forests of Dan Kada Dodo and Dan Gado in Niger; <i>Vol. 7(6), pp. 149-159, June, 2015 DOI: 10.5897/JHF2014.0374</i> <i>Journal of Horticulture and Forestry</i>	Abdourhamane Hamidou ¹ . Morou Boube ¹ Larwanou Mahamane ² , Mahamane Ali ¹ Saadou Mahamane ¹ and Ronald Bellefontaine ³	¹ Département de Biologie, Faculté des Sciences et Techniques, Université de Maradi, BP 465 Maradi, Niger. ² African Forest Forum (AFF), C/o World Agroforestry Center (ICRAF), United Nations Avenue, P. O. Box 30677 -00100, Nairobi, Kenya. ³ Cirad, Bios, UMR AGAP, TA A-108 / C-Campus Int. Baillarguet, 34398 Montpellier Cedex 5, France	http://agritrop.cirad.fr/576945/1/Hamidou%202015%20et%20al.pdf
33.	Effects of Physical and Biological Treatments in Restoring Degraded Crusted Soil in Niger. <i>Research Journal of Agriculture and Environmental Management.</i> <i>Vol. 3(10), pp. 560-568, November 2014</i>	Soumanal ¹ . Abasse, T. ¹ , Larwanou, M. ² , Makoré, B. ¹ , Morou, B. ³ , Thiru, D.I. ⁴ and Mahamane A ⁴	Institut National de Recherche Agronomique du Niger BP 429, Niamey Niger. ² African Forest Forum (AFF), P.O. Box 30677 –00100, Nairobi, Kenya. ³ Université Dan Kouldour de Maradi, BP 465, Maradi Niger. Université Abdou Moumouni de Niamey, BP10662.	http://www.apexjournal.org

Phase II: manuscripts under preparation

No	Manuscript title	Authors
34	Investigating the potential for a transition towards a sustainable biofuel sector: case study of the Congo Basin region	Eugene Chia, Kevin Enongene, Kalama Fobissie, Vincent Oeba, Larwanou Mahamane
35	AFOLU INDC: Trends, Options and Outlook for Africa	Kalama Fobissie, Eugene Loh, Kevin Enongene, Vincent Oeba, Larwanou Mahamane
36	Climate mitigation interventions in Africa's forestry sector: prospects, synergies & effects on food, fuel & fiber production	Francis E. Bisong, Vincent Oeba, Larwanou Mahamane
37	Climate resilient adaptation pathways in Africa's forestry sector	Francis E. Bisong, Vincent Oeba, Larwanou Mahamane
38	Can REDD+ deliver the climate change mitigations that studied countries need: OR they should look beyond REDD+?	Fredrick Mulenga, Lawarnou Mahamane, Vincent Oeba
39	Pathways for harmonizing forest-related climate change adaptation and mitigation in Africa	Martin Nganje, Lawarnou Mahamane, Vincent Oeba,
40	Policies and other issues relating to the nexus food- fuel- fibre production in the context of climate change in West Africa	Ajewole, Opeyemi Isaac, Larwanou Mahamane, Vincent Oeba
41	The Effect of Indole-3-butyric acid (IBA) on the Rooting of Camphor (<i>Ocotea usambarensis</i>) stem cuttings	Giathi, G., Machua, J., Gathura, M., Oeba, V. and Ingutia, C
42	Effect of seasonality, graft type and scion characteristics on Bala propagation of <i>Vitex payos lourr</i> (Merr.) in the drylands of Kenya; Submitted to Journal of Horticulture and Forestry	Bala Pauline., Giathi Gitehi., Oeba Vincent., Stephen F. Kenya; Omondi., Okeyo Michael., Luvanda Albert1

Monograph

Bjorn Lundgren, 2015. Forests and trees: Their roles and opportunities in Africa's economic development, food security and environmental health.

http://www.afforum.org/sites/default/files/English/English_102.pdf

Book Chapters (Phase II)

No	Contributed book	Authors	Book title	Publisher	Eds	Year
1	Forestry and resilience to climate change: A synthesis on application of forest- based adaptation strategies to reduce vulnerability among communities in sub-Saharan Africa.	Vincent O. Oeba and Larwanou Mahamane	Climate Change Adaptation in Africa, Climate Change Management	©Springer International Publishing AG; DOI 10.1007/978-3-319-49520-0_1; Book ISBN :978-3-319-49519-4	W. Leal et al. (eds.)	2017
2	Integrating Farmers and Scientific Methods for Evaluating Climate Change Adaptation Options in Embu County	P.N.M. Njeru, J. Mugwe, I. Maina, M. Mucheru-Muna, D. Mugendi, J.K. Lekasi, S.K. Kimani, J.Miriti, V.O.Oeba, A.O. Esilaba, E.Mutuma, K.P.C. Rao and F. Muriithi	<i>Adapting African Agriculture to Climate Change. Transforming Rural Livelihoods.</i>	©Springer International Publishing AG. XI 233p Illus., Hardcover ISBN 978-3-319-12999-0	Ed. Leal Filho W., Esilaba, A.O., Rao, K.P.C., Sridhar, G.	2015
3.	Public Sector, Private Sector and Social- Cultural Response Option	<i>Coordinating lead author:</i> Henry Neufeldt; <i>Lead contributors:</i> Pablo Pacheco., Hemant R.Ojah., Sarah Ayeri Ogalleh., Jason Donovan and Lisa Fuchs; <i>Contributing authors:</i> Daniela Kleinschmit., Patti Kristjanson., Godwin Kowero., Vincent Oeba., Brownwen Powell	<i>Forests and Food: Addressing Hunger and Nutrition Across Sustainable Landscapes</i>	International Union of Forest Research Organizations (IUFRO) ISBN 976-1-906-30-090000	Ed. Bhaskar Vira., Christoph Wildburger., Stephanie Mansourian	2015

II: Policy Briefs (Phase I)

No	Title	Author	Authors affiliation	Web access
	Phase I			
1	African forests, climate change and the green	African Forest Forum	<i>African Forest Forum (AFF), Nairobi, Kenya</i>	http://www.afforum.org/node/70139
2	Strengthening community- based responses to climate	African Forest Forum	<i>African Forest Forum (AFF), Nairobi, Kenya</i>	http://www.afforum.org/node/70138
3	Climate change and African moist forests;	Okali D	University of Ibadan, Ibadan,	http://www.afforum.org/node/20171
4	Climate change, forests and trees in the Sahel; Vol. 2(4)	African Forest Forum	<i>African Forest Forum (AFF), Nairobi, Kenya</i>	http://www.afforum.org/node/70136
5	Responses to climate change in the wildlife sector in Africa; Vol. 2 (5)	African Forest Forum	<i>African Forest Forum (AFF), Nairobi,</i>	http://www.afforum.org/node/70135

Phase II: Policy briefs under preparation

No	Policy brief title	Authors
6	Policies and strategies related to the nexus food-fuel-fibre production in the context of climate change: Case of Central Africa	Eugene Chia, Kevin Enongene, Kalama Fobissie, Vincent Oeba, Larwanou Mahamane
7	AFOLU Matters in the INDCs of African Countries Expectations for Adaptation and Mitigation	Kalama Fobissie, Eugene Loh, Kevin Enongene, Vincent Oeba, Larwanou Mahamane
8	Climate Resilient Adaptation and Mitigation Pathways for Africa's AFOLU Sector	Francis E. Bisong, Vincent Oeba, Larwanou Mahamane
9	Thorough legal reforms: A Key to REDD+ Implementation in Africa	Fredrick Mulenga, Lawarnou Mahamane, Vincent Oeba
10	Food- fuel-fibre production nexus and climate change in west Africa	Martin Nganje, Lawarnou Mahamane, Vincent Oeba, Onguso
11	Improvement of forest carbon knowledge: gateway towards greening Africa's economy	Ajewole, Opeyemi Isaac, Larwanou Mahamane, Vincent Onguso Oeba

III: Documents under AFF Working Paper Series (Phase I)

N ^o	Title	Authors	Web access	Year of publication
1	Scope, potential and implementation of mitigation activities in mangrove forests in eastern and Southern Africa; Vol. 2(1)	Kitula, R.	http://www.afforum.org/node/19599	2014
2	The Great Green Wall of Sahara and Sahel initiative: climate change and gender issues; Vol. 2(2).	Abdou, M.	http://www.afforum.org/node/19595	2014
3	Practices, techniques and technologies for restoring degraded landscapes in the Sahel; Vol. 2(3)	Abdo, M.	http://www.afforum.org/node/19594	2014
4	Climate change vulnerability of African forest plantations and the role of permanent sample plots in monitoring, reporting and verification for REDD+ in plantations; Vol. 2(4)	Makundi, W.R.	http://www.afforum.org/node/25098	2014
5	Prospects for REDD+ in African forest plantations; Vol. 2(5)	Makundi, R.W.	http://www.afforum.org/node/19600	2014
6	Climate vulnerability of biophysical and socio-economic systems in woodlands and savannas in Eastern and Southern Africa; Vol. 2(6)	Munishi, P.K.T.	http://www.afforum.org/node/19603	2014
7	Assessment of the status of forestry associations in West Africa; Vol. 2(7)	Popoola, L.	http://www.afforum.org/node/19607	2014
8	Cross-border trade in forest products and services and trade impacts in West Africa;	Popoola, L.	http://www.afforum.org/node/19608	2014
9	An analytical review of forest governance and equitable trade practices related to climate change in Central Africa; Vol.2(9)	Assemble-Mvondo, S.	http://www.afforum.org/node/19597	2014
10	Review of national plans and programmes related to people, forests and climate change in West Africa; Vol. 2(10)	Okali, D.	http://www.afforum.org/node/70311	2014
11	Restoration practices in	Chirwa, P.	http://www.afforum.org/node/70312	2014

	degraded landscapes of Eastern Africa; Vol. 2(11)	W.		
12	2014, Restoration practices in degraded landscapes of Southern Africa; Vol. 2(12)	Chirwa, P.W.	http://www.afforum.org/node/70313	2014
13	Vulnerability of biophysical and socioeconomic systems in moist tropical forests in west and central Africa to climate change; Vol. 2(13)	Muoghalu, I. J.	http://www.afforum.org/node/70314	2014
14	Vulnerability of biospherical and socioeconomic systems in savannahs and woodlands of West and Central Africa to climate change; Vol. 2(14)	Muoghalu, I.J.	http://www.afforum.org/node/70314	2014
15	African woodlands and savannahs: opportunities from and potential of REDD+; Vol. 2(15)	Mujuru, L. & Chidumayo, E.	http://www.afforum.org/node/19602	2014
16	Climate change mitigation activities in the Tropical Moist Forests of West Africa; Vol. 2(16)	Akande, J. A.	http://www.afforum.org/node/19596	2014
17	African forests, people and climate change project: forest and climate changes Policies, Strategies and Programmes in the SADC and COMESA regions; Vol. 2(17)	Dlamini, C. S.	http://www.afforum.org/node/25274	2014
18	Forest and climate change policies, strategies and programmes in the EAC and IGAD sub-regions; Vol. 2(18)	Milimo, P.B.	http://www.afforum.org/node/25239	2014
19	National and sub-national REDD+ activities implemented in mangroves in West and Central Africa; Vol. 2(19)	Popoola L.	http://www.afforum.org/node/70315	2014
20	NAMAs and NAPAs in Eastern Africa; Vol. 2(20)	Kojwang, H. O.	http://www.afforum.org/node/26053	2014

Phase II: Documents under AFF Working Paper Series in preparation

No	Title	Authors
21	Policies and other related issues to the nexus food- fuel- fibre production in the context of climate change in Southern Africa	Dennis Kayambazinthu., Vincent O.Oeba., Larwanou Mahamane
22	Policies and other related issues to the nexus food- fuel- fibre production in the context of climate change in West Africa and Sahel	Ajewole Opeyemi Isaac., Vincent O.Oeba., Larwanou Mahamane
23	Food-fuel-fibre production policies and strategies in the context of climate change in Central Africa	Eugene Chia., Kevin Enongene., Kalame Fobissie., Larwanou Mahamane., Vincent
24	Implementation of REDD+, CDM and AFOLU INDC in Francophone Africa	Eugene Chia., Kevin Enongene., Kalame Fobissie., Larwanou Mahamane., Vincent
25	Implementation of REDD+, CDM, AFOLU INDC and voluntary carbon related activities in Anglophone Africa	Fredrick Mulenga., Vincent O.Oeba., Larwanou Mahamane
26	Strengthening adaptation policies and AFOLU based climate change mitigation interventions relevant to African forestry and people in Anglophone Africa	Francis E. Bisong., Larwanou Mahamane., Vincent O.Oeba
27	Strengthening adaptation policies and AFOLU based climate change mitigation interventions relevant to African forestry and people in francophone Africa	Martin Nganje., Larwanou Mahamane., Vincent O.Oeba
28	Role of African forestry private sector in response to climate change in Zimbabwe	Lizzie Mujuru., Vincent O.Oeba., Larwanou
29	Role of African forestry private sector in response to climate change in Kenya	Dickson L. Makanji., Larwanou Mahamane.,
30	Role of African forestry private sector in response to climate change in Central Africa: Case study of Republic of Congo and Cameroon	TIEGUHONG Julius Chupezi., Vincent O.Oeba., Larwanou

IV: Fact sheets Phase I

	Author	Year	Title
1.	African Forest Forum (AFF)	2012	Sustainable Management of African Forests in a Changing Climate. Africa Forest Forum Factsheet. Nairobi, Kenya.
2.	African Forest Forum (AFF)	2012	Planting Forests in Africa Using the Global Carbon Market. Africa Forest Forum Factsheet. Nairobi, Kenya.
3.	African Forest Forum (AFF)	2012	Forests and Trees in Adaptation and Mitigation Initiatives. Africa Forest Forum Factsheet. Nairobi, Kenya.
4.	African Forest Forum (AFF)	2012	Forest Livelihoods: Caught Between Conservation And Adaptation? Africa Forest Forum Factsheet. Nairobi, Kenya.

Phase II: Fact sheets under preparation

	Author	Title
5.	African Forest Forum (AFF)	Role of African forestry sector in response to climate change: case of Zimbabwe
6.	African Forest Forum (AFF)	Role of Kenya's forestry private sector in response to climate change
7.	African Forest Forum (AFF)	African forestry private sector in response to climate change
8.	African Forest Forum (AFF)	Food-fuel- fibre production nexus in forest and Sahel zones of west Africa
9.		Reducing risk and enhancing benefits of forest-based climate change adaptation and mitigation in Africa
10.		How useful has been 10 years of implementing AR-CDM compared to 10 years of piloting REDD for Ethiopia, Kenya, Ghana, Tanzania and Zambia?

V: Training Modules Phase I

1. African Forest Forum 2014: Training modules on forest based climate change adaptation, mitigation, carbon trading, and payment for other environmental services. <http://www.afforum.org/publications/training-modules>

V: Training Compendia (Under preparation)

Phase II:

1. Basic Science of Climate Change: A compendium for professional training in African forestry
2. Basic Science of Climate Change: A compendium for technical training in African forestry

3. Basic Science of Climate Change: A compendium for informal training in African forestry
4. Carbon Market and Trade: A compendium for professional training in African forestry
5. Carbon Market and Trade: A compendium for technical training in African forestry
6. Carbon Market and Trade: A compendium for informal training in African forestry
7. International Dialogues, Processes and Mechanisms on Climate Change: A compendium for professional and technical training in African forestry

VI. List of sponsored students

No	Student name	University	Degree
1	Oyieko Simeon Oruko	University of Nairobi, Kenya	M.Sc.
2	Saalu Faith Nyangute	Maasai Mara University, Kenya	M.Sc.
3	Basiru Adeniyi Okanlawon	Jomo Kenyatta University of Agriculture and Technology,	M.Sc.
4	Zelege Arragaw	Addis Ababa University, Ethiopia	Ph.D.
5	Musa Tarig Tagelsir Hassan	University of Bahri, Sudan	Ph.D.
6	Mataya Bennet Andack Fraser	Sokoine University of Agriculture, Tanzania	Ph.D.
7	Moussa Massaoudou	Dan Dicko Dan Kolodo University of Maradi, Niger	Ph.D.
8	Fenta Muluken Mekuyie	University of Free State, South Africa	Ph.D.
9	Haulesi Chisangalalo	Lilongwe University of Agriculture, Malawi	M.Sc.
10	Rakotondrasoa Lovanirina	University of Antananarivo,	Post Doctoral
11	Kangbeni Dimobe	University of Ouagadougou, Burkina Faso	Ph.D.
12	Gebretasdik Zenebe Mekonnen	Hawassa University, Ethiopia	Ph.D.
13	Mamane Abdourahmane	Dan Dicko Dan Kolodo University of Maradi, Niger	M.Sc.
14	Gondwe Monica Fides	University of Pretoria, South Africa	Ph.D.

VII: Articles presented in scientific conferences (Phase I)

Articles presented in scientific conferences

1. Implications of climate variability and change on opportunities and challenges of bio-fuel production and utilization in Sub-Saharan Africa: An oral presentation during IVth conference on climate change and development in Africa held in Marrakech, Morocco on 8-10 October 2014. Oeba, O. Vincent*, Yemshaw K. Yonas., Larwanou Mahamane., Chirwa W. Paxie and Kowero Godwin.
2. Climate change and climate variability in montane forests of Sub-Saharan Africa: A poster presentation during the 1st African Mountains Regional Forum conference held in Arusha, Tanzania on 22-24, October 2014. Oeba, O. Vincent., Larwanou Mahamane., Chirwa W. Paxie., and Yila, J

3. Chirwa, P. W., Babalola, F. D., Mahamane, Larwanou. Efforts toward restoration of Nigerian degraded landscape: lessons from Southern Africa's Forest practices, 2014 Proceedings of the 4th Nigerian Tropical Biology Association Conference. 3-4 September 2013, Lagos Nigeria.P138-143.
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Phase II

5. Opportunities and prospects of forest based CDM and REDD+ projects for sustainable development in Sub-Saharan Africa. Vincent O.Oeba and Larwanou Mahamane. Vth conference on climate change and development in Africa (CCDA-V); *Africa sustainable development and climate change; prospects of Paris and beyond, Oct. 28-30, 2015, Victoria Fall, Zimbabwe*
6. Prospecting Prosopis for carbon trade and market in Kenya: Untapped potentials. Vincent O.Oeba., Choge Simon., Kiama Stephen: Second National Workshop, held on 18-22 May 2015 in Kenya, and on "*Unlocking the economic potentials of Prosopis in the face of climate change*" organized by KEFRI, Kenya Forestry Service (KFS), County Government of Baringo and other County Governments invaded with prosopis.

VIII: Scientific proceedings: Abstracts of papers (Phase II)

1. African Forest Forum (AFF) 2015: Pre-XIV World Forestry Congress Workshop Forests, People and Environment: Some Perspectives from Africa 4-5 September 2015 Durban, South Africa - Book of abstracts. In International Forestry Review Vol.17 (S3); <http://www.afforum.org/node/66669>



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A platform for stakeholders in African forestry



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