African Forest Forum

A platform for stakeholders in African forestry

African forests, people and climate change

End of Phase 2 Report:
1 January 2015 – 31 May 2018

African forests, people and climate change – End of phase 2 report (1 January 2015-31 May 2018)

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Acronyms and abbreviations

ACPC : African Climate Policy Centre
AFF : African Forest Forum
AFF-CCP : African Forest Forum-Climate Change Program
AFOLU : Agriculture, Forestry and Other Land Uses
AG : African Group
AHEG : Ad-Hoc Expert Group
AMCEN : African Ministerial Conference on Environment
AUC : African Union Commission
CCDA-V : Vth Conference on Climate Change Development in Africa
CDM : Clean Development Mechanism
CIFOR : Center for International Forestry Research
COFO : Committee on Forestry
COMESA : Common Market for Eastern and Southern Africa
COMIFAC : Central African Forest Commission
CLIs : Country-led Initiatives
CSO : Civil Society Organisations
CSIR-FORIG : Council for Scientific and Industrial Research, Forestry Research Institute of Ghana
EAC : Eastern African Community
EALA : Eastern Africa Legislative Assembly
ECCAS : Economic Community of Central African States
FAO : Food and Agriculture Organization of the United Nations
FLEGT : Forest Law Enforcement Governance and Trade
FORNESSA : Forestry Research Network of Sub-Saharan Africa
ECOWAS : Economic Community of West African States
GEF : Global Environmental Facility
GFFF : Global Forest Fund Facility
GGWSSI : Great Green Wall for the Sahara and Sahelian Initiative
GPCC : Global Programme on Climate Change
GOF : Global Objectives on Forests
HLS : High Level Segment
IAF : International Arrangement on Forests
ICRAF : International Centre for Research in Agroforestry
IGAD : Intergovernmental Authority for Development
INDC : Intended Nationally Determined Contributions
ITTO : International Tropical Timber Organisation
KEFRI : Kenya Forestry Research Institute
KM : Knowledge Management
LDD : Land Degradation and Deforestation
MoU : Memorandum of Understanding
MRV : Measurement, Reporting and Verification
MYPoW : Multi-Year Programme of Work

NAMAs	: Nationally Appropriate Mitigation Actions
NAPAs	: National Adaptation Programme of Actions
NFP	: National Forest Programme
NGARA	: Network for Natural Gums and Resins in Africa
NGOs	: Non-Governmental Organizations
NLBI	: Non-Legally Binding Instrument
NTFPs	: Non-Timber Forest Products
PMER	: Planning, Monitoring, Evaluation and Reporting
RaCSA	: Rapid forest Stock Carbon Appraisal
RECs	: Regional Economic Communities
REDD+	: Reducing Emissions from Deforestation and forest Degradation
SA	: South Africa
SADC	: Southern African Development Community
SDC	: Swiss Agency for Development and Cooperation
SDGs	: Sustainable Development Goals
SME	: Small and Medium Enterprises
ToR	: Terms of Reference
TST	: Technical Support Team to Raise the Profile of Forestry
UNECA	: United Nations Economic Commission for Africa
UNEP	: United Nations Environmental Programme
UNFCCC	: United Nations Framework Convention on Climate Change
UNCCD	: United Nations Convention to Combat Desertification
UNFF 11-13	: United Nations Forum on Forests, Eleventh, Twelfth and Thirteenth Session
WMF	: World Mountain Forum

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The African Forest Forum (AFF) appreciates the kind financial support from the Government of Switzerland through SDC to undertake a number of project activities in Africa. This demonstrates the interest of the people of Switzerland in addressing forestry related climate change issues in the world. AFF acknowledges good guidance and collaboration from the Global Programme Climate Change at SDC as well as from the AFF Governing Council and its various committees that ensured effective planning and implementation of Phase 2 activities. AFF also extends its sincere appreciation to all African governments and other stakeholders who enabled it to achieve the targets of the project. The institution recognizes the various contributions from AFF members, and especially those who were assigned various tasks as experts and postgraduate students (and their supervisors), that led to successful achievement of the planned outputs.

Executive Summary

This report provides an overview of the achievements realised within project phase that commenced on January 01, 2015 and ended on May 31, 2018. The following is a summary of key achievements:

1. Improved knowledge among African stakeholders in managing forests and landscape in the context of climate change. This was achieved through generation of evidence-based information that was shared to African forestry stakeholders such as governments, private sector, research and academia, civil society organisations (CSO), youth, men and women, Regional Economic Communities (RECs), and International Organisations. In this regard, AFF held three regional information sharing workshops on climate change in African forestry to disseminate the findings from studies conducted in Sub-Saharan Africa that focused on the following areas:
   a. Reducing Emissions from Deforestation and forest Degradation (REDD+), Clean Development Mechanisms (CDM), Agriculture, Forestry and Other Land Uses (AFOLU);
   b. Forest based adaptation and mitigation measures pertinent to AFOLU; drivers of forest cover change and land use-change;
   c. The balance between food-fuel-fibre production in the context of climate change; and
   d. Public and private sector development in forestry and response to climate change.

   The three regional information sharing workshops reached 186 African forestry stakeholders on face to face and over 5.2 million people through electronic and printed media from over 200 countries globally. AFF also held a "Pre-XIV World Forestry Congress Workshop" in Durban, South Africa that was attended by 127 delegates across Africa. This workshop focused on sharing information on forests, people and environment among African forest stakeholders. The papers presented during the workshop were published as a special issue in *Southern Forests: A Journal of Forest Science* and uploaded on AFF website for wider readership.

2. Equipped African forestry stakeholders with knowledge and skills on how to develop forest carbon projects, assess/measure forest carbon and apply principles and concepts of carbon markets and trading in forest carbon projects. A total of 217 African stakeholders were trained in six countries, namely; Madagascar (42), Swaziland (30), Guinea Conakry (40), Cote d'Ivoire (31), Sierra Leone (35), and Liberia (39). Also, AFF in collaboration with Bern University of Applied Sciences, strengthened the African capacity on international forestry and climate change through eight young Africans trained at master's degree level, on international forestry and climate change.

3. Developed eight training compendiums in a pedagogical manner on:
   a. basic science of climate change for professional and technical training and for short courses in African forestry, one for each (3 compendia);
   b. climate modelling and scenario development for professional training in African forestry (1 compendium);
   c. international dialogues, processes and mechanisms on climate change for professional and technical training in African forestry (1 compendium);
   d. carbon markets and trade for professional and technical training and for short courses in African forestry, one for each (3 compendiums).

These training materials are the first of their kind in Africa, and most likely in the world, and are based on demands by African forestry and related training institutions expressed through a needs assessment conducted by AFF. They are expected to provide educational and training information, organized in a pedagogical manner, that is crucial to a standard or uniform approach in building the capacity and skills on climate change issues related to forestry among African forestry stakeholders in the various African sub-regions, as well as providing guidance on addressing national and regional issues on climate change and forestry by other interested stakeholders.

4. Equipped African forestry stakeholders with new knowledge and skills on climate change modelling and scenario development with applications to the forestry sector. This was achieved through training of 116 stakeholders in African forestry from research and academia, government departments and non-governmental organisations in two sub-regional workshops. A post workshop evaluation that was carried out by AFF indicated that none of the selected participants from Southern and Eastern Africa had attended a similar training or been trained in climate modelling that have applications to the forestry sector. Also, 69 percent of the participants from Central and West Africa had never attended similar course. This calls for increased efforts on such training in future and more specifically at national level.

5. Improved understanding among African stakeholders on:
    a. vulnerability of people and forests to climate change;
    b. promising adaptation and mitigation measures pertinent to AFOLU;
    c. trends on forest cover change in various selected hotspots; and
    d. how the private sector in African forestry is addressing climate change issues.

    AFF sponsored postgraduate students and hired specialized experts who undertook studies in the above four areas in selected countries, namely; Niger, Burkina Faso, Mali, Nigeria, Cote d'Ivoire, Ghana, Cameroon, Republic of Congo, Democratic Republic of Congo, Ethiopia, Kenya, Sudan, Tanzania, Zambia, Zimbabwe, Malawi and Madagascar. The information and knowledge generated has been shared widely to various stakeholders through different platforms namely AFF Working Paper Series, factsheets, policy briefs, journal articles, workshops and trainings, website and social media as reported under no.1 above.

6. Equipped African forest-based small-medium enterprises (SMEs) with skills and knowledge on how to develop and engage on forest carbon business. This was achieved through two training workshops on rapid forest carbon appraisal, one held in Maputo, Mozambique, for Anglophone-Lusophone Africa where 33 participants were trained; and the other held in Cotonou, Benin, for Francophone Africa where 30 participants were trained. The representative of SMEs were drawn from South Africa, Lesotho, Swaziland, Malawi, Angola, Zambia, Zimbabwe, Mozambique, Tanzania, Uganda, Kenya, Ethiopia, Sudan, Ghana, Liberia, Nigeria, Gambia, Madagascar, Niger, Democratic Republic of Congo, Cameroon, Cote d'Ivoire, Burkina Faso, Gabon, Republic of Congo, Tchad, Guinea Conakry, Senegal, Mali, Mauritania, Togo and Benin. Following the training for Francophone countries, some of the delegates from the private sector formed their own WhatsApp platform for sharing information among themselves. This platform continues to be operational and managed by themselves.

They reported that the information gained from the training was very useful for them and that AFF enabled actors from different countries to meet, exchange information and therefore form this platform to facilitate developing better trade arrangements in forest products, among other things. Further, with synergies with the Sida funded project they have also initiated an association for marketing and trade in forest products, with the constitution and other relevant documents for its registration developed. AFF will work with the ECOWAS Secretariat to have this process supported at the highest levels in West Africa.

7. Enhanced linkages and partnerships with various organisations, institutions and platforms in raising the profile of AFF in its role on forestry and climate change in Africa. In this regard, AFF technical staff at the Secretariat participated in a number of scientific conferences and workshops where they shared information on forestry and climate change. Some of these events include *: stakeholders' workshop of the project on "woody weeds in East Africa: assessing and mitigating their negative impacts on biodiversity, ecosystems services and rural livelihood in Kenya; International Union of Forests Research Organisation (IUFRO) symposium on silviculture and management of dry forests; Policy level seminar on participatory natural resource management for County Environment Executives in Kenya; Second national Prosopis workshop on unlocking the economic potentials of Prosopis in the face of climate change; Country-led Initiatives (CLIs) in Interlaken, Switzerland on governing forest landscapes: lessons learnt from ten years of experience and the way forward post-2015; Fifth conference on climate change and development in Africa (CCDA-V); Africa sustainable development and climate change: prospects of Paris and beyond in Victoria falls, Zimbabwe; Capacity building on sustainable forest management in Southern Africa; Validation workshop on Sustainable Forest Management Programme Framework for Africa sponsored by African Union Commission and FAO; Regional collaboration workshop on monitoring forest resources in West Africa organised by Bern University of Applied Sciences, Economic Community of West African States (ECOWAS) and United Nations on Reducing emissions from Deforestation and forest Degradation (UN-REDD); and World Mountain Forum (WMF) conference held in Mbale, Uganda.*

8. AFF Technical Support Team to Raise the Profile of Forestry (AFF-TST) supported African delegates to international processes relating to forests and climate change. Specifically, 76 African delegates were trained during the eleventh (40) and twelfth (36) United Nations Forum on Forests (UNFF 11 and UNFF 12) preparatory meetings. The delegates were equipped with a better understanding of MEAs and how to mainstream them in their national policies and activities. They were also equipped with negotiations skills that enabled them to effectively articulate the African forestry related interests in UNFF 11, 12 and 13 sessions and as guided by the African Group common position developed during the AFF organized preparatory meetings for these UNFF sessions.

9. AFF-TST provided significant inputs to the meeting of FAO Committee on Forestry (COFO) in 2016. These were related to issues discussed at the meeting that were largely on the potential of forests (including forests contributions to livelihood, food security, jobs, gender equality) and many other global development issues including the 2030 Agenda and the Paris Agreement.

10. Generated credible information that include: improving policies and approaches in AFOLU activities; how land is allocated between production of food-fuel-fibre (3Fs) and potential influence of climate in selected African countries; how to strengthening adaptation policies and AFOLU based climate change mitigation interventions in African forestry and with a focus on rural people; the state of the African forestry private sector and how it responds to climate change; the state of implementation of REDD+, CDM and AFOLU INDC; and the state of voluntary forest carbon related activities in Africa.

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND INFORMATION

The second phase of this project phase focused on creating and enhancing capacities of stakeholders to strengthen the role of Africa's forests and trees and the people who depend on them to adapt to climate change and mitigate its adverse effects in various landscapes in ways that could improve livelihoods, sustain biodiversity and improve the quality of the environment. Its implementation was guided by two objectives that targeted the attainment of six outcomes through the realisation of various outputs from many project activities implemented from 01 January 2015 to 31 May 2018.

The first objective that targeted enhancing the knowledge and capacities of African stakeholders in managing forests and landscapes in the context of climate change, was expected to generate the following four outcomes:

Outcome 1. African stakeholders have better knowledge and skills on climate change and relevant AFOLU issues;
Outcome 2. African stakeholders have better understanding of vulnerability to climate change and application of promising adaptation measures pertinent to AFOLU;
Outcome 3. AFOLU based climate change mitigation interventions understood and applied by African stakeholders; and
Outcome 4. A better structured African forestry private sector equipped with appropriate tools to address climate change challenges.

The second objective targeted improving existing policies and initiatives relevant to forests and climate change through evidenced based science developed by the project, and this was expected to generate the following two outcomes:

Outcome 5. Profile of the forest sector raised relative to other sectors of the economy in response to the challenges of climate change; and
Outcome 6: Policies and practices that integrate mitigation and adaptation in AFOLU identified, profiled and promoted by African policy makers.

The implementation of the project activities was mainly executed through AFF members and involved other stakeholders in African forestry and climate change. The other key partners AFF worked with include regional and international organisations such as Great Green Wall of the Sahara and Sahel Initiative (GGWSSI), ECOWAS, SADC, COMIFAC, ECCAS, EAC, IGAD, COMESA, AUC, ACPC, UNCCD, UNFF, UNFCCC, FAO, UNECA, UNEP, CIFOR, ICRAF and ITTO among others. AFF also worked with many African institutions as well.

This report therefore provides a synthesis of the achievements realised at each objective and outcome levels, the challenges and lessons learned, emerged issues and key recommendations that AFF can consider as it continues to implement its "Programmatic Areas" of work.

1.2 APPROACH IN DEVELOPING THE REPORT

The write up of this report was based on various reports and AFF knowledge products generated during the project implementation period. A critical review was undertaken based on the following documents developed during the project period:

i) Approved project proposal;
ii) Approved semi-annual and annual reports;
iii) Training workshop reports;
iv) Information sharing workshop reports;
v) Knowledge Management and Communication Unit reports;
vi) Planning, Monitoring, Evaluation and Reporting Unit reports;
vii) Annual and semi-annual financial reports;
viii) Annual financial audit reports;
ix) Project knowledge products produced by the project;
x) Staff travel/mission reports; and
xi) Report on an external review of Phase 2.

CHAPTER 2: ACHIEVEMENTS OF PROJECT OBJECTIVES AND OUTCOMES

The following are key highlights on what was achieved during the project implementation period as well as a brief presentation of key activities that generated the achievements.

2.1 KEY ACHIEVEMENTS OF OBJECTIVE 1: TO IMPROVE KNOWLEDGE AND CAPACITIES OF AFRICAN STAKEHOLDERS IN MANAGING FORESTS AND LANDSCAPES IN THE CONTEXT OF CLIMATE CHANGE

This objective aimed at:

- Improving existing knowledge or generating new knowledge where possible; and
- Building the capacity of relevant stakeholders through sharing the knowledge generated and through targeted training.

Both will contribute to improving the capacity of stakeholders in African forestry to undertake appropriate interventions in the management of forest and tree resources in different landscapes, and in ways that would influence positive response in policies and practices on these resources and at the same time internalising climate change.

(a) Achievements in improving knowledge

(i) Evidence science-based information available to improve the understanding, by African forestry stakeholders, on:

a) vulnerability of local communities and forests to adverse effects of climate change;
b) applications of promising adaptation and mitigation measures pertinent to AFOLU;
c) trends in forest cover change in various selected hotspots; and
d) how the private sector in African forestry is addressing climate change issues.

In this regard AFF sponsored 14 postgraduate students from African universities who were awarded research scholarships to conduct detailed studies on impacts of climate change; vulnerability of biophysical and socio-economic systems; and 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 selected hotspots. The students were from University of Nairobi, Maasai Mara University, Jomo Kenyatta University of Agriculture and Technology, all in Kenya; University of Bahri, Republic of Sudan; University Dan Dicko Dankoulodo, in Maradi, Niger; Addis Ababa University and Hawassa University in Ethiopia; Sokoine University of Agriculture, Tanzania; Lilongwe University, Malawi; University of Antananarivo, Madagascar; Free State University and University of Pretoria in South Africa; and University of Ouagadougou, Burkina Faso.

Further, AFF improved knowledge on vulnerability and impacts or influences of climate change and variability on forests, trees and the people who depend on them, and taking

into account gender considerations. This has been accomplished through nine African postgraduate students competitively awarded AFF research fellowships to undertake in-depth studies covering different forest types, namely: woodlands (Ethiopia-PhD; Republic of Sudan-PhD; Malawi-PhD); parklands and agroforests (Niger-PhD; Ethiopia-PhD;); tropical rain forests (Kenya-MSc; Nigeria-MSc; Madagascar, Post-doctoral and MSc); and montane forests (Kenya-MSc).

Similarly, a better understanding of these issues were made through the Sida supported project that awarded research scholarships to 8 students (6 PhD and 2 MSc) to conduct studies on land use, land cover change and forestry (LULUCF) in relation to livelihoods in different forest types in Africa. The students came from the following universities: University of Stellenbosch, South Africa; University of Buea and University of Yaoundé, both in Republic of Cameroon; Wondo Genet College of Forestry and Natural Resources, Ethiopia; Egerton University, Kenya; Moshi Co-operative University, Tanzania; and University of Pretoria in South Africa.

Also with regard to strengthening understanding and knowledge on adaptation policies and measures to enhance resilience of social systems and ecosystems in Africa as well as a better understanding of AFOLU based climate change mitigation interventions among African forestry stakeholders AFF contracted several experts to undertake in-depth studies in the following countries: Zimbabwe, Zambia, Tanzania, Kenya, Ethiopia, Nigeria and Ghana; and Madagascar, Democratic Republic of Congo, Cameroon, Cote d'Ivoire and Burkina Faso.

With respect to understanding better the role of the private sector in African forestry and how the sector is responding to climate change AFF contracted several experts to undertake in-depth studies in Zimbabwe, Kenya, Cameroon and Republic of Congo. The Sida supported project also increased a much broader understanding of the private sector through studies that were undertaken Niger, Burkina Faso, Mali, Nigeria, Cote d'Ivoire, Ghana, Cameroon, Republic of Congo, Democratic Republic of Congo, Ethiopia, Kenya, Sudan, Tanzania, Zambia, Zimbabwe, Malawi and Madagascar.

(i) Enhanced understanding on African forests, people and climate change issues through production and sharing of AFF knowledge products to various stakeholders in African forestry.

AFF through SDC support published 10 AFF Working Paper Series, submitted 10 journal articles for publication as Special Issue of the *International Forestry Review*, 10 policy briefs and 10 fact sheets. These knowledge products contain rich information that is valuable in the forest sector and climate change. The other related knowledge products developed were nine journal articles, three book chapters and abstracts of scientific proceedings (Annex 1).

Therefore, both SDC and Sida supported projects synergistically generated considerable information that contributed to a much better understanding of the issues addressed by the first objective.

b) Achievements made in building the capacity of relevant stakeholders

(i) African forestry stakeholders with science-based information on how to better manage forests and landscapes in the context of climate change in order to improve livelihoods, national incomes and their environment

In this regard, three workshops were organised to share the information generated by AFF and targeting the following broad areas:

- Reducing Emissions from Deforestation and forest Degradation (REDD+), Clean Development Mechanisms (CDM), Agriculture, Forestry and Other Land Uses (AFOLU);
- Forest based adaptation and mitigation measures pertinent to AFOLU;
- Drivers of forest cover change and land use-change;
- The balance between food-fuel-fibre production in the context of climate change; and
- Public and private sector development in forestry, including the sector's response to climate change.

The three regional information sharing workshops reached 186 African forest stakeholders. All information shared was also uploaded on AFF's website for wider readership that reached slightly over 5.2 million people through electronic and printed media from over 200 countries globally.

Further, AFF also organised, with several partners, a pre-XIV World Forestry Congress workshop in Durban, South Africa in 2015 that was attended by 127 delegates from across Africa. The workshop shared information related to the interactions among forests, people and environment, with a strong bias towards African experiences. The papers presented during the workshop were published as a special issue in *Southern Forests: a Journal of Forest Science* and uploaded on AFF website for wider readership.

The Planning, Monitoring, Evaluation and Reporting Unit of AFF (PMERU) conducted an assessment of the perceptions by delegates who participated in two workshops organized by AFF to share the information generated by AFF through the two projects supported by SDC and Sida. With respect to the information generated through SDC support the majority (85%) of the delegates informed that the information shared at these workshops on climate change in African forestry was either new or relatively new to them. The specific areas reported on new information included information on how land was shifting between the production of food-fuel-fibre on the continent (33%); policies and other aspects influencing the production of fuel wood and charcoal (33%); experiences with Clean Development Mechanism (CDM); REDD+ and AFOLU (32%); and forest based adaptation and mitigation strategies to reduce vulnerability of local communities to adverse effects of climate change (32%). These statistics demonstrate the level of understanding (capacity) of these issues that has been built through AFF in Africa towards addressing climate change issues in African forestry.

Further, AFF also shared this information through its website, info mail, social media and publications (including journals, fact sheets and policy briefs). An analysis of what information visitors to AFF's website download indicate the following:

- Forest based climate change adaptation and mitigation (79%);
- Education and training materials (73%);
- Information relevant to research and policy formulation (69%);
- Good forest governance and forest law enforcement (69%);

- Conservation of African forest resources (68%);
- Participatory forest management (65%);
- Knowledge management and communication (57%);
- Regional and international negotiations (54%); and
- Private sector in forestry (51%).

The information obtained through various workshops and training sessions was used by the participants to:

- facilitate preparation of research proposals (50%);
- prepare forest management related documents (41%);
- to prepare policy related documents (38%);
- to prepare teaching materials, conference papers and scientific journals articles (36% for each);
- prepare academic dissertations/theses (22%); and
- prepare forest regulations and protocols (3%).

AFF, through its PMER Unit, conducts post training/workshop evaluations six months and one year after such events. In this regard the post workshop evaluations examined the areas that the workshop delegates are addressing using the information generated and shared by AFF through these two workshops. Such surveys give AFF a glimpse on the '*uptake*' and emerging *'impact'* of the information. For example, some of the respondents indicated that the information shared by AFF has strengthened the West African Science Centre on Climate change and adaptation Land use (WASCAL) Program in the sub region. More examples will be given in subsequent sections.

(ii) *African forestry stakeholders equipped with knowledge and skills on how to develop forest carbon projects, assess/measure forest carbon and apply the principles and concepts of carbon markets and trade in forest carbon projects.*

A total of 217 African stakeholders from government, academia, civil society organisations, and research were trained on these aspects, and they were from Madagascar (42), Swaziland (30), Guinea Conakry (40), Cote d'Ivoire (31), Sierra Leone (35), and Liberia (39). Further, AFF in collaboration with Bern University of Applied Sciences, strengthened African capacity on international forestry and climate change through training of eight young Africans at a master's degree level, and specializing on international forestry and climate change.

The evaluations made by the AFF-PMER Unit after these trainings on the extent at which these interventions on capacity and skills development among African forestry stakeholders have impacted the beneficiaries, shows positive response in addressing national and regional issues on climate change and forestry. The participants trained on rapid forest carbon stock appraisal (RaCSA), for example, some have reported that the knowledge and skills gained enabled them to develop concept notes that were submitted to Green Climate Fund to solicit financial resources in addressing climate change mitigation and adaptation through afforestation and reforestation of degraded forests. Others have also used knowledge and skills gained to develop postgraduate research proposals, participate in forest carbon stock assessment under REDD+ and other forest-based mitigation programmes in their respective countries. Equally, the training modules and compendiums developed have enabled some higher learning institutions to revise their curricula by

considering new areas proposed. For instance, the University of Lomé in Togo and University of Tillabery in Niger developed new Master of Science curricula that were largely guided by the training modules developed by AFF. These training modules are aimed at facilitating the building of the capacity of young scholars to offer solutions critical to adaptation to and mitigation of effects of climate change in their respective countries/region, as well as taking advantages that come with climate change.

(iii) *African stakeholders from the private sector, representing forest-based small and medium scale enterprises (SMEs), equipped with skills and knowledge on how to develop and engage in forest carbon business.*

This was achieved through two workshop trainings, targeting selected national representatives of the private sector in forestry, on rapid forest carbon appraisal, one held in Maputo, Mozambique for Anglophone-Lusophone Africa where 33 participants were trained; another held in Cotonou, Benin, for Francophone Africa where 30 participants were trained. The representative of SMEs were drawn from South Africa, Kingdom of Lesotho, Swaziland, Malawi, Angola, Zambia, Zimbabwe, Mozambique, Tanzania, Uganda, Kenya, Ethiopia, Sudan, Ghana, Liberia, Nigeria, Gambia, Madagascar, Niger, Democratic Republic of Congo, Cameroon, Cote d'Ivoire, Burkina Faso, Gabon, Republic of Congo, Tchad, Guinea Conakry, Senegal, Mali, Mauritania, Togo and Benin.

As an offshoot of these efforts the private sector representatives from West Africa have since formed a WhatsApp information sharing platform among themselves. Together with their colleagues from Central Africa they are now at an advanced stage in establishing a forest products marketing and trade association to facilitate their activities. In this regard they have a constitution and documents to guide the operations of their association. AFF will bring all these to the attention of the ECOWAS Secretariat for further processing within this economic community.

(iv) African forestry stakeholders equipped with new knowledge and skills on climate change modelling and scenario development with applications to forestry sector.

This was achieved through training of 116 stakeholders in African forestry from research and academia, government departments and non-governmental organisations. An evaluation that was carried out by the AFF-PMER Unit after the training indicated that:

- of the selected participants from Southern and Eastern Africa, none had attended a similar course or had been trained in climate modelling and applications to forestry sector;
- 69% of those trained from Central and West Africa had never attended or trained in similar course;
- new knowledge and skills gained was reported to be handy in addressing the future of the forest estate in the context of climate change in their respective countries;
- they were sharing information in their own countries through various meetings, seminars and teaching/training;
- some were spearheading the establishment of climate change units in their respective institutions to address climate issues in relation to forestry; and
- others reported using knowledge gained to undertake climate monitoring related activities.

(v) *African forestry and related education and training institutions capacitated with pedagogically developed teaching materials to guide delivery of education on climate change as it relates to forests and trees*.

AFF has developed eight training compendiums in a pedagogical manner on the following areas: Basic science of climate change for professional, technical and short courses training in African forestry, one for each (3 compendiums); Climate modelling and scenario development for professional training in African forestry (1 compendium); International dialogues, processes and mechanisms on climate change for professional and technical training in African forestry(1compendium); Carbon markets and trading for professional, technical and short courses in African forestry, one for each (3 compendiums). These compendiums will be shared widely in the second half of 2018; though some of the participants to the workshops that validated them reported to have already started using the earlier drafts. This is a reflection of the scarcity of well-organized teaching and educational texts on climate change as it relates to forests and trees. The need for these compendiums was expressed through a needs assessment undertaken by AFF on the continent.

(v) *Strengthened partnerships with national institutions responsible for research, academia, forest administration and management*.

This has been done through Memorandum of Understanding (MoUs) with various institutions, namely: 1) Ministry of Environment, Water and Natural Resources of the Government of Kenya. 2) Kenya Forestry Research Institute (KEFRI) 3) twelve African national universities to enhance capacity in forestry in the context of climate change, namely; University of Nairobi, Maasai Mara University and Jomo Kenyatta University of Agriculture and Technology in Kenya, Addis Ababa University in Ethiopia, University of Bahri in Sudan, Sokoine University of Agriculture in Tanzania, Dan Dicko Dan Kolodo University of Maradi in Niger, University of Free State in South Africa, Lilongwe University of Agriculture in Malawi, University of Antananarivo in Madagascar and Université De Ouagadougou in Burkina Faso. These universities provided postgraduate students who undertook part of AFF's work.

(vi) *Enhanced linkages and partnerships with various organisations and platforms in raising the profile of AFF in its role on forestry and climate change in Africa.*

In this regard, AFF technical staff at the Secretariat participated in several scientific conferences and workshops where they shared information on forestry and climate change. Some of these events include*: stakeholders' workshop of the project on "woody weeds in East Africa: assessing and mitigating their negative impacts on biodiversity, ecosystems services and rural livelihood in Kenya; International Union of Forests Research Organisation (IUFRO) symposium on silviculture and management of dry forests; Policy level seminar on participatory natural resource management for County Environment Executives in Kenya; Second national Prosopis workshop on unlocking the economic potentials of Prosopis in the face of climate change; Country-led Initiatives (CLIs) in Interlaken, Switzerland on governing forest landscapes: lessons learnt from ten years of experience and the way forward post-2015; Fifth conference on climate change and development in Africa (CCDA-V); Africa sustainable development and climate change; prospects of Paris and beyond in Victoria falls, Zimbabwe; Capacity building on sustainable forest management in Southern Africa; Validation workshop on Sustainable Forest Management Programme Framework for Africa sponsored by African Union Commission*

and FAO; Regional collaboration workshop on monitoring forest resources in West Africa organised by Bern University of Applied Sciences, Economic Community of West African States (ECOWAS) and United Nations on Reducing emissions from Deforestation and forest Degradation (UN-REDD); and World Mountain Forum (WMF) conference held in Mbale, Uganda.

In summary, the ***first objective was achieved,*** and the impact of the work done under this objective continues to manifest on the ground. In this regard, there is evidence that the considerable information generated by AFF:

(a) has contributed to improving knowledge of stakeholders in African forestry as shared through workshops, website, info mail, social media and text, and reports on the evaluations done by the PMER Unit;

(b) is being used to build the capacities of African stakeholders from government, civil society, private sector, academia and research on various aspects of managing and using forests and tree resources;

(c) is being used by actors in forestry from private sector through academia to civil society to guide the management and use of forest and tree resources.

The uptake and impact of this knowledge is still on-going and should be monitored way beyond the expiry of this phase of the project. More examples on uptake and impact will be given in subsequent sections.

2.2 KEY ACHIEVEMENTS OF OBJECTIVE 2: TO INFORM AND CONTRIBUTE TO THE SHAPING OF POLICIES AND INITIATIVES RELEVANT TO FORESTS AND CLIMATE CHANGE

This objective focused on how to better profile of the forestry sector as well as raising the profile of climate change in forestry and related policies and initiatives. The following achievements were made:

(i) African delegates to international processes relating to forests and climate change effectively supported by the AFF Technical Support Team to Raise the Profile of Forestry (AFF-TST) and climate change in international processes.

Specifically, 76 African delegates were trained to effectively participate in the eleventh (40) and twelfth (36) sessions of United Nations Forum on Forests (UNFF 11 and UNFF 12) through preparatory meetings organized by AFF-TST. The delegates (African Group as known at the UN) were equipped with negotiations skills than enabled them to articulate issues relevant to African forestry during UNFF 11 and 12 as guided by the common position developed during the preparatory meetings and backstopping provided by TST during these two sessions. This resulted to consideration of African inputs into international forest agenda for implementation. They were also appraised with other MEAs and how to mainstream them in their national policies and activities.

AFF-TST also enhanced inputs by African delegates to the 13th session of the United Nations Forum on Forests (UNFF 13) through backstopping provided to them in the UNFF13 meeting. There was no preparatory meeting organized for the delegates prior to the session.

AFF-TST also strengthened the participation of the African delegates during first meeting of the United Nations Forum on Forests (UNFF) open-ended intergovernmental ad hoc expert group (AHEG1) on the strategic plan to implement the international arrangement on forests, through backstopping provided to the delegates. This was a very important meeting that broached the following: strategic approaches and actions to achieve the objectives of the International Arrangements on Forests (IAF), including the mission, vision, communication strategy, possible goals, targets and priority action; the roles of IAF components and the organizational structure of the Strategic Plan; suggestions for the Quadrennial Programme of Work (4POW); and possible elements for the framework for reviewing implementation of the Strategic Plan.

AFF-TST also provided valuable inputs, on its own, and also backstopped African delegates during AHEG 2 meeting that developed further the Strategic Plan 2017-2030 and the Quadrennial Programme of Work (4OPW) 2017-2020; guiding principles for the inclusion of goals and targets; existing inter-governmentally agreed targets, objectives, goals and commitment on forests; forests' contribution to the Sustainable Development Goals (SDGs); and an indicative list of categories of forest-related data. These global initiatives are expected to be mainstreamed in national plans, programmes and policies for implementation and reporting.

AFF-TST provided significant inputs to the FAO Committee on Forestry (COFO) meeting in 2016. This meeting examined potential of forests, including forests contributions to livelihood, food security, jobs, gender equality and many other global development goals including the 2030 Agenda and the Paris Agreement.

(ii) Stakeholders in African forestry equipped with information and knowledge that could shape policies and initiatives in forestry and climate change

This has been partially reported on under the first objective through the activities related to sharing of information and knowledge generated by AFF. Suffice to add that AFF generated and shared credible information on: better policies and approaches in AFOLU activities; the shifting of land based on production of food-fuel-fibre (3Fs) and also taking into account climate change as related to forestry in selected African countries; how to strengthen adaptation policies and AFOLU based climate change mitigation interventions that are relevant to African forests and people who depend on these resources; the state of the African forestry private sector and its response to climate change; status of implementation of REDD+, CDM and AFOLU INDC; and voluntary forest carbon related activities in Africa. The knowledge products developed such as policy briefs, documents published under AFF Working Paper Series, factsheets, journal articles from the aforementioned areas are being be shared widely through different communication pathways including workshops, info mail, website, social media, and texts.

Reinforcing this achievement is the Sida supported initiatives on 'good forest governance, forest law enforcement and fair trade in forest products' as well as trainings on 'multilateral environmental agreements (MEAs)'.

An evaluation undertaken by AFF-PMER Unit after the workshops and trainings indicate that with respect to trainings on MEAs (that include the Paris Agreement) the respondents used the knowledge and skills to:

- Create awareness among stakeholder groups on the significance of MEA processes (70%);
- Incorporate MEAs processes and negotiations into forestry training programs (50%);
- Develop strategies for mainstreaming MEAs into institutional and national plans (50%);
- Conduct research studies related to MEAs (20%); and
- Fundraising for projects to implement targets and resolutions from MEAs (30%).

Actually, from the surveys conducted by PMER people use information generated by several components of the project as well as those from the Sida funded project for policy decisions. About 38% of those surveyed indicate that they use the information for developing various policy related documents, while 41% use the knowledge products for forest management issues (Fig.1).

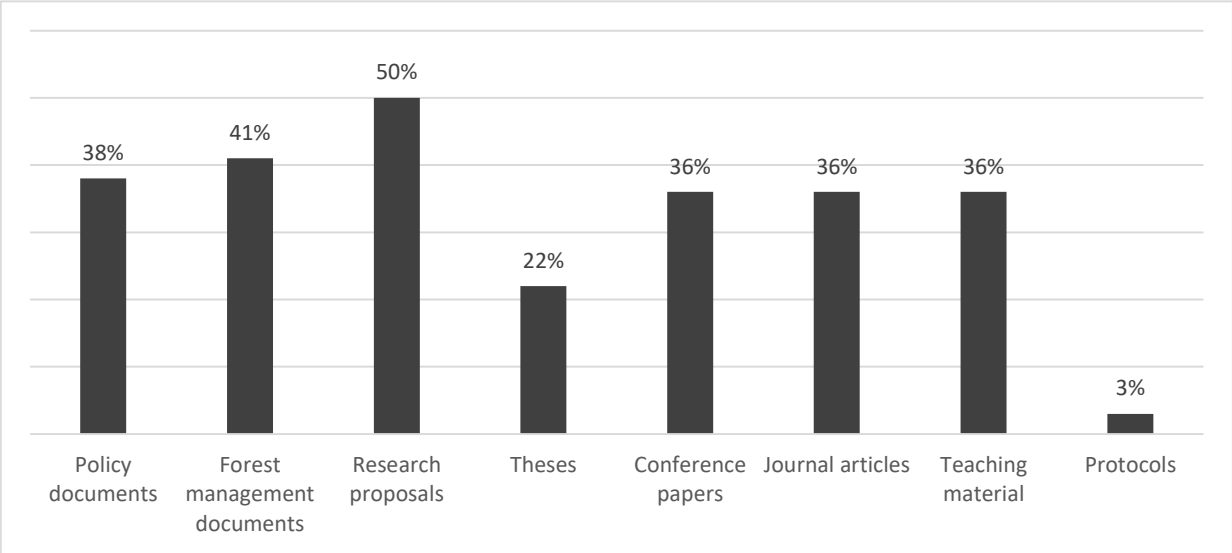

Fig. 1 Use of knowledge products developed by AFF

In 2017, the most popular publication on the website, was the English version of the "*Training modules on forest-based climate change adaptation, mitigation, carbon trading, and payment for other environmental services"*. Two out of ten of the most downloaded documents were articles in the *International Forestry Review Vol.17* and *Southern Forests: a Journal of Forest Science, Vol. 79, 2017.* The publications titled, *"Forest certification in Africa: achievements, challenges and opportunities* and *Forests and Trees: Their roles and opportunities in Africa's economic development, food security and environmental health* continue to feature in the top ten list from 2016 and 2015 respectively. Six of the top ten downloads for 2017 feature climate change and forestry as an area of interest for web visitors (See Table 1 below).

Table 1: Top 10 downloads (2017)

Year	Publication
2014	Training modules on forest-based climate change adaptation, mitigation, carbon trading, and payment for other environmental services
2016	Forest certification in Africa: achievements, challenges and opportunities.

2015	Sustainable land management practices in the Sahel: review of practices, techniques and technologies for land restoration and strategy for up-scaling. In *International Forestry Review Vol.17 (S3)*
2015	Forests and Trees: Their roles and opportunities in Africa's economic development, food security and environmental health
2011	Climate Change and African Forest and Wildlife Resources
2014	The Great Green Wall of Sahara and Sahel initiative: climate change and gender issues. Working Paper Vol. 2 (2).
2017	Socio-economic factors influencing household dependence on forests and its implication for forest-based climate change interventions. In *Southern Forests: A Journal of Forest Science, Vol. 79, 2017. DOI: 10.2989/20702620.2016.1255420*
2017	The status and trends of forest and tree pests and diseases management in Africa. Working Paper Vol. 3(3)
2017	Forestry and Resilience to Climate Change: A Synthesis on Application of Forest-Based Adaptation Strategies to Reduce Vulnerability Among Communities in Sub-Saharan Africa
2011	Forest plantations and woodlots in Ethiopia. Vol 1 (12).

In summary, the ***second objective was achieved*** in that:

(a) Considerable knowledge products were developed by AFF and capacity built among African delegates to international processes to both inform and make them understand the MEAs and to articulate issues in such processes; and

(b) African stakeholders are using the knowledge products (Fig.1) and Table 1; and are contributing to shaping policies and initiatives related to forests and climate change in forestry. This is also partly reported on under the first objective and in subsequent sections.

Since uptake and impact of the work done through this project are ongoing these have to be monitored beyond the expiry of the project.

2.3 KEY ACHIEVEMENTS OF OUTCOME 1: AFRICAN STAKEHOLDERS HAVE BETTER KNOWLEDGE AND SKILLS ON CLIMATE CHANGE AND RELEVANT AFOLU ISSUES

This outcome is achieved on the basis of the following outputs:
- Improving quality and sharing updated knowledge and information on climate change and climate variability in Africa;
- Improving understanding on trends on forest cover change and drivers of land-use change; and
- Strengthening capacity on climate change as related to forestry at all levels.

2.3.1 Improved quality and shared updated knowledge and information on climate change and climate variability in Africa

The following achievements were made in relation to generating and sharing quality and updated knowledge and information on climate change and variability among stakeholders in African forestry:

(i) Enhanced quality of information on African forestry and climate change

This output was achieved through in-depth studies that were undertaken by postgraduate students under close supervision and examination of their dissertations by reputable scientists. The type of studies undertaken, and institutions involved have been reported on under section one on objective no.1. Further, the findings by contracted experts were reviewed by AFF scientific staff and external scientists before they were published as a special issue of *Southern Forests: a Journal of Forest Science* that had its own editorial process. In addition, other papers have also been reviewed by AFF staff and external reviewers and are now being processed by the *International Forestry Review* (a journal of the Commonwealth Forestry Association in London) that also has its own editorial process. Also, all reports and documents published under AFF Working Paper Series were reviewed by AFF staff and external reviewers. In 2006 the h-index rating was 20 for AFF's publications, which was very good given that AFF was not even ten years old. According to Hirsch (2005)[1] after 20 years of research, an h index of 20 is good, 40 is outstanding and 60 is truly exceptional.

In short, the scientific quality of the work undertaken by AFF has increased considerably through better quality assurance approaches as evidenced from the scientific publications by individual scientists through these two and other journals and scientifically edited documents on the AFF website as reflected by the h index. This is a good reflection on how AFF is contributing to science.

Further, synthesizing important research results and documentation of ongoing activities is a core activity of AFF. Since 2015, the amount of content has doubled (Table 2) and comprises publications, videos, audio files and news items. The information materials freely available on the website include: Journal articles (35), policy briefs (19), factsheets (7), reports (26), publications under AFF Working Paper Series (41), training modules (2), newsletters (15), edited proceedings of meetings (1), books (4), compendium (1), and corporate documents (12) (Fig.2). Much of the content has so far been developed by a selection of experts with support of the AFF secretariat staff and SDC and Sida funding for the project.

Table 2: Type of content produced by AFF and partners (2015 vs. 2017)

Type of content	2015	2017	% increase
1. Publications (journal articles, fact sheets, reports, publications under AFF Working Paper Series, training modules, newsletter, meeting proceedings, books, compendium and corporate documents)	46	163	72
2. Videos and audio files	10	32	69
3. News items published	4	41	80

The most common topics included in these knowledge products include: forest ecosystem services, sustainable forest management, forest policy formulation and implementation, marketing and trade in forest products and services, climate change, capacity building and skills development. All this information is available freely on the website and is relevant to many African forestry stakeholders and facilitates decision making on many issues and at various levels, as well as in policy formulation and implementation. This is attested by the downloading of a total of 22,928 documents along with 15,576,182 pages opened in 2017.

[1] Hirsch, J. E. (2005). An index to quantify an individual's scientific research output. *Proceedings of the National Academy of Sciences of the United States of America, 102*(46), 16569-16572. doi:10.1073/pnas.0507655102

Figure 2: Knowledge products produced by AFF

(i) Improved sharing of updated knowledge and information on climate change and climate variability in Africa

This output was achieved through different knowledge and information exchange platforms such as scientific conferences, info mail, social media, information sharing workshops and seminars, trainings, scientific publications and AFF knowledge products (publications under AFF Working Paper Series, policy briefs, factsheets, technical reports, books, training compendiums).

For example, in 2015 AFF sponsored 121 African delegates to attend a pre-XIV World Forestry Congress (WFC) workshop and WFC in Durban, South Africa. This was done in partnership with the African Union Commission-AUC, The Network for Natural Gums and Resins in Africa-NGARA, the Centre for Sustainable Development- University of Ibadan-CSD and the Forest Research Network of Sub-Saharan Africa-FORNESSA. The delegates were drawn from different sub regions representing government institutions, civil society organizations, academia and research, youth and women groups, international non-governmental organisations, regional economic communities, students from African universities and development partners (Figure 3).

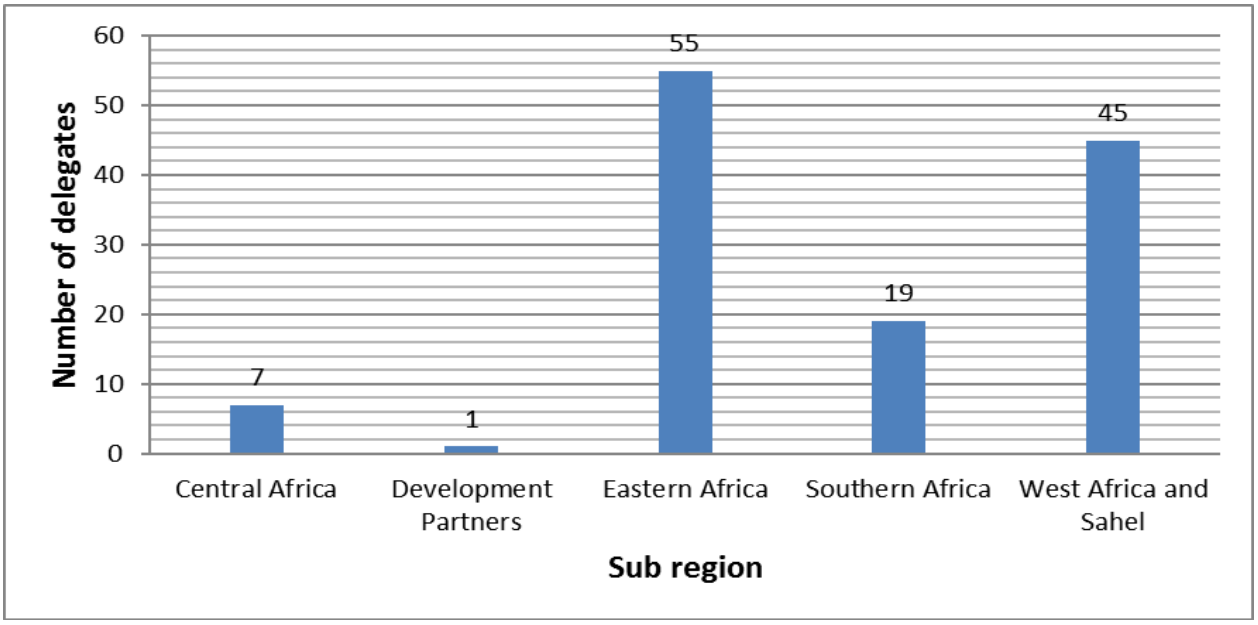

Figure 3. Delegates per sub region attended pre-XIV World Forestry Congress workshop in Durban

During the pre-congress workshop, 38 oral presentations were made and 20 poster presentations covering different issues in forestry; climate change and climate variability such as rehabilitation of degraded lands using trees, managing forests in the context of climate change; forest governance; marketing and trade in forest products; and socio-economic issues in forestry. Selected papers presented during the pre-congress workshop were published in *Southern Forests: a Journal of Forest Science, Vol 79* as special issue that focused on forests, people and environment. These papers were also uploaded to AFF website for wider readership to various stakeholders interested in African forestry and climate change.

During the project period, two regional information sharing workshops were held in Lomé, Togo, and Entebbe, Uganda, that attracted 134 delegates, of which, 82.5% were male and 17.5% female drawn from different public and private institutions. These workshops focused on how forest business and management can be improved, climate change in African forestry, as well as strengthening partnerships among various institutions. The periodical evaluation, by AFF-PMER Unit, of the information shared during these workshops and other platforms revealed that 82% of the stakeholders were reached with new or relatively information on climate change in African forestry. This was related to presentations made on the status of food-fuel-fibre nexus in selected countries, Clean Development Mechanism, AFOLU, forest-based adaptation strategies and REDD+, among others, as already reported on under the first objective. The knowledge gained is being used for capacity building, research, and awareness raising and community development to respond to the challenges of climate change, as already reported on.

(iii) *Improved functionality of AFF knowledge platforms, namely the website and social media*, *and data bases*

This has resulted into more efficient and effective sharing of information and exchange of knowledge among African stakeholders interested in forestry, climate change and variability in Africa. These platforms are regularly updated and show significant growth on downloads,

unique visitors, pages opened, hits and followers on social platforms. For example, in 2017, the website recorded 680,254 visits from 254,741 visitors from 200 countries worldwide who were in no doubt interested in various forestry issues (See Table 3). In 2016, there were 74,571 visits from 37,833 visitors from 153 countries to the website. This shows a growth in total audience size by 216,908 unique visitors and an increase in reach by an additional 47 countries. A further analysis indicates that the number of unique visitors has grown steadily from 2014 with 10,747 unique visitors to 254,741 in 2017 and is a true reflection of the growth of AFF's web audience, that is also a reflection on the website functionality as well as improvements in managing social media (Table 3).

Table 3: Gauging interest in AFF communications tools

Users (2016-2017)	2016	2017	Increase
Website pages opened	436,126	15,576,182	15,140,056
Website unique visitors	37,833	254,741	216,908
Twitter followers	488	651	163
Facebook likes	644	942	298

Also, in January to May 2018, the website recorded 485,997 visits from 127,872 unique visitors from over 180 countries, resulting in 5.2 million hits. The highest visits and subsequent new users to the website originate from the following top ten countries, and in that order: Kenya, India, USA, Nigeria, UK, Cameroon, Ethiopia, Tanzania, South Africa and Germany. AFF continues to primarily target its information to African country stakeholders and this can be seen to bear fruit because 6 out of the ten countries are from the African continent. The fact that the AFF is headquartered in Kenya could be one of the main reasons that the country tops the list, partly because Secretariat staff visit the site very often, and including the webmaster. India follows closely behind, along with USA, UK and Germany, demonstrating an international and widespread appeal of AFF's activities and products, stretching from the Americas through Europe to Asia.

The website has been expanded considerably in terms of functionality to include two new knowledge portals. The portals link to 109 databases on forest resources to provide a one-stop shop for forestry knowledge in Africa. Cross links to 48 third party sites and partner organizations have also been provided to facilitate sharing of forestry information in a different format that may be useful, interesting or facilitates increased opportunities to stream content (Table 4).

Table 4: AFF website database summary

No	Category Name	Total
1	Forest resources databases	27
2	Forest journals on open access	41
3	Climate change databases	30
4	Others	11
	Total	**109**

In this way, the website avails knowledge on priority issues, critical for the development of the forest sector, and including current, new and emerging issues; the aim being to inform policy making, investment decisions and capacity building at continental, sub-regional and national levels in Africa.

(iv) *Increased visibility of AFF*

Apart from the visibility accorded to AFF using the website, social media, workshops and training events, AFF has organised media events that provided direct interactions between journalists from various media houses in sub-Saharan Africa on one hand, and forestry experts, policymakers, representatives of training institutions, private sector, NGOs and AFF staff on several issues including priority and emerging issues on sustainable forest management (SFM), resilience to climate change by forests and trees, as well as the resilience of the people who depend on these resources in a climate change context. A key achievement towards this end has been the development of a media database of 60 journalists to facilitate sharing of timely information on the outcomes and news-worthy findings from AFF's work - crucial for increased visibility, uptake and impact. The media outlets were selected following a comparative analysis of local, regional and international media based on reach, circulation and credibility. As a result, several media interviews have been coordinated by the AFF Secretariat, to help raise the profile of forestry, highlight threats to forest resources and the environment, and champion better management of African forests and trees.

For example, in 2017 forty-one (41) articles (22 English, 18 Kiswahili, and 1 French) were shared and with media coverage spread across the East, West, South and Central Africa, as well as with the wider international community. The amount of media coverage (41 articles) was a great improvement over the one in 2016 which featured 17 articles, while in 2015 only 4 articles were featured in the media. As a result, attention to and coverage of forestry issues has substantially improved; with AFF's profile, reputation and membership gaining visibility on local, regional and international news channels, sites and social media platforms. Based on the results of the live on-air discussions, the media fraternity has been highlighted as having an increasingly important role to play in providing timely information to a wider audience to help promote the sustainable management of forest and tree resources, conservation of the environment and improvement of livelihoods. The cost of buying space taken up by the media articles, of which AFF did not pay for in 2017, is USD 32,558.

2.3.2 Improved understanding of trends on forest cover change and drivers of land-use change

This has been accomplished through nine African postgraduate students competitively awarded AFF research fellowships to undertake in-depth studies covering different forest types, namely: woodlands (Ethiopia-PhD; Republic of Sudan-PhD; Malawi-PhD); parklands and agroforests (Niger-PhD; Ethiopia-PhD;); tropical rain forests (Kenya-MSc; Nigeria-MSc; Madagascar, Post-doctoral and MSc); and montane forests (Kenya-MSc).

The information generated from these studies is being shared widely through workshops, as reported under objective no. 1; and continues to be shared through journal articles and theses made by the students. For example, some of the key drivers on forest cover change and land-use change reported include agricultural expansion associated with population increase searching for food; encroachment of protected areas; weak enforcement of laws and regulations for conserved and forest management areas due to inadequate staff; illegal logging to meet the high demand of wood for varied uses, among others. Some of the key recommendations that came out from the studies include:

- need to support policy makers to design proper land use policies that can enhance productivity of resources in order to alleviate poverty and reward the environment;
- validate and promote sustainable land use practices to curb losses of valuable ecosystem functions without affecting livelihood sources of the local people; and
- promote better sustainable management of forest resources that enhances resilience to climate change and climate variability among the rural poor and other vulnerable groups and ecosystems.

2.3.3 Strengthening capacity on climate change as related to forestry at all levels

The following were achieved:

(i) Strengthened African capacity on international forestry and climate change through training of four African postgraduate students in Bern University of Applied Sciences. The trainings were done through AFF-HAFL Fellowship/scholarship program between AFF and Bern University of Applied Sciences.

(ii) Developed eight contextualized teaching compendiums in a pedagogical manner namely: (i) Basic science of climate change (3), one each for professional, technical and short courses training in African forestry; (ii) Carbon markets and trade (3), one each for professional, technical and short courses training in African forestry; (iii) International dialogues, processes and mechanisms on climate change for professional and technical training in African forestry (1); and (iv) climate modelling and scenario for professional in African forestry (1). The compendiums will be shared widely in the second half of 2018 to support higher institutions and other training organisations on various capacity building programmes on climate change and forestry.

(iii) Equipped African stakeholders in forestry and climate change with knowledge and skills to develop forest carbon projects, assess/measure forest carbon and apply principles and concepts of carbon marketing and trade in forest carbon projects. A total of 217 African stakeholders were trained covering six countries (Figure 4).

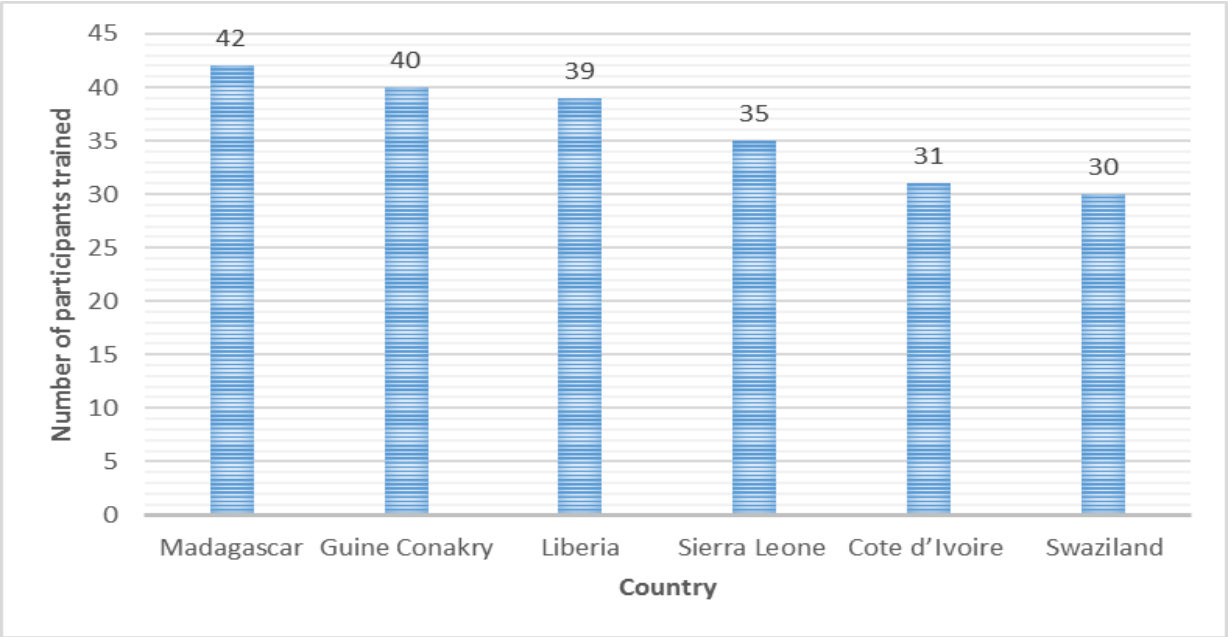

Figure 4. Number of participants trained on RaCSA in selected countries

The PMER Unit carried out a survey after the trainings that showed that some of the participants are actively participating and involved on the following based on the skills and knowledge gained on rapid forest stock carbon appraisal:

a) measurement, reporting and verification of carbon accounting;
b) development of project idea note and project design document;
c) training other stakeholders on forest stock carbon assessment; and
d) Networking with other institutions on forest carbon markets and trading among others.

Table 5 provides some examples on the level of engagement of some of the selected countries after RaCSA training.

Table 5. Summary of actions taken by some of trained participants on RaCSA from selected countries

Participant details	Action taken (reported verbatim)
Head of Protected Areas Development and Management Division, Ministry of Environment, Water and Forest, Republic of Guinea	*Evaluation of the carbon stock in the Upper Niger National Park Training of wildlife officers in the assessment of the carbon stock in a forest. Project to support operationalization of protected areas and financed by the European Union*
Head of the Wildlife and Development, Department, Communautaire, Societe de Developpement des Forets de Cote d'Ivoire (SODEFOR)	*Through my institution, I am involved in integration of carbon projects, where I use the skills from the training. We have noted limited coordination between stakeholders and public management institutions*
Head of Study Unit, Ministry of Water and Forests, Cote d'Ivoire	*Held numerous discussions with the various participants from the AFF workshop. There is raised interest among colleagues and other professionals to participate in carbon trade projects;*
Member of The APV - FLEGT Technical Secretariat, Ministry of Waters and Forests, Cote d'Ivoire	*Participated in the preparation of the project note of the EU FLEGT program for implementation in Cote d'Ivoire. This training has strengthened our commitment to improve forest governance and conserve forest resources. The cross-cutting importance of forests in the fields of agriculture, the environment and life is no longer questionable*
Manager, Tropical Timber of Africa (BTA), Cote d'Ivoire	*Prepared a project note. Since 2007, BTA has been working on industrial reforestation projects with partners such as ONF-I or Carbon Positive. These projects focused on timber and the carbon sequestration component was very much less developed. The training allowed me to strengthen this component. We have renewed contacts with the potential partners for the realization of our projects goals. In addition to BTA, we also support the territorial communities through an Association of Forest Territorial Collectivities of Cote d'Ivoire (COFORCI). A Mayor also participated in this training. The interest in*

Participant details	Action taken (reported verbatim)
	forestry projects at the community level is more noticeable.
Executive Director, Ecology NGO Cote d'Ivoire	*Reporting to other members of our NGO platform.*
Head, Biodiversity Conservation Division, Centre Forestier de N'Zerekore, Guinea	*Contributed to better conservation of the forest, in readiness for carbon projects. For example, all staff are now determined in the preparation of the management plan for the Ziama biosphere reserve, while many favored the industrial exploitation of wood.*
Director General, Center Forestier de N'Zerekore, Guinea	*Contributed to the discussions for the establishment of the management structures of the REDD +, through preparation of legal sections. As part of the Bonn Challenge, contributed to the design of the Forest Landscape Restoration Program, where priority is given to forest carbon sequestration and assessment*
Head of Department GIS, Ministry of Water and Forestry, Cote d'Ivore	*Participating in implementation of a new law on the Ivorian forestry code through the adoption of decrees*
Chef Antenne Mont Béro, Centre Forestier de N'Zérékoré, Guinea	*At the end of this workshop, I received a training grant from Senghor University of Alexandria in Egypt on the Management of Protected Areas from September 2016 to May 2017 for a study on "Adaptation of local populations to climatic variability in the National Park of Haut Niger in Guinea: analysis of perception and strategies" The study is still ongoing.*

(iv) Equipped African stakeholders in forestry and climate change with knowledge and skills on basic science of climate change with specific focus on climate modelling, scenario development and applications to forestry sector.

A total of 114 participants were trained in 2017/18, of which, 60 were drawn from West and Central Africa and 54 were from Eastern and Southern Africa as well as Small Island States. The countries covered from Central and West Africa were Burkina Faso, Cote d'Ivoire, Togo, Ghana, Niger, Nigeria, Benin, Gambia, Sierra Leone, Liberia, Ghana, Guinée, Sénégal, Tchad and Cameroon.

The participants from Eastern and Southern Africa were drawn from Republic of Sudan, Southern Sudan, Ethiopia, Kenya, Tanzania, Uganda, Rwanda, Burundi, Zambia, Malawi, South Africa, Mozambique, Zimbabwe, Angola, Lesotho, Swaziland, Seychelles and Comoros. It was evident from the evaluation after the training that participants gained new knowledge on climate modelling and applications to forestry sector, as already reported under objective no. 1.

Specifically, participants indicated that they will use skills and knowledge gained to train and build capacity of students and other stakeholders in climate modelling, advocate for policies and legislation to improve forest-based mitigation and adaptation to climate change, sensitize stakeholders on approaches to monitor changes in the forestry

environment, conduct further research to inform stakeholders of new developments in climate modelling and variability, and sensitize stakeholders outside forest sector on applications of climate change models for decision making.

For the selected participants from Southern and Eastern Africa, 100% had never attended such training as compared to 69% from Central and West Africa. The PMER Unit will make a follow-up on the pledges made by the participants after 6 and 12months.

2.4 KEY ACHIEVEMENTS OF OUTCOME 2: AFRICAN STAKEHOLDERS HAVE BETTER UNDERSTANDING OF VULNERABILITY TO CLIMATE CHANGE AND APPLICATION OF PROMISING ADAPTATION MEASURES PERTINENT TO AFOLU

This outcome is achieved through the realisation of the following outputs:

a) Gender-sensitive assessment of vulnerability and impacts/influences of climate change and variability on forests, trees and the people who depend on them; and

b) Strengthened adaptation policies and measures as they are applied, including resilience of social systems and ecosystems.

In this regard, the knowledge generated and shared improved understanding of the vulnerability and impacts/influences of climate change and variability on forests, trees and the people who depend on these resources, taking into account gender considerations. This was accomplished through nine African postgraduate students competitively awarded AFF Research Fellowship to undertake in-depth studies covering different forest types, namely: woodlands (Ethiopia, PhD; Sudan, PhD; Malawi, PhD;); parklands and agroforests (Niger, PhD; Ethiopia, PhD); tropical rain forests (Kenya, MSc; Nigeria, MSc; Madagascar, Post-doctoral and MSc); and montane forests (Kenya, MSc). The findings of some studies have already been published as journal articles and thesis and widely shared.

The other significant achievement made on this outcome is generation of knowledge and sharing of information that is strengthening understanding on adaptation policies and approaches that could be employed to enhance resilience of social systems and ecosystems in Africa. This has been achieved through studies carried out by several contracted experts covering the following Anglophone and Francophone countries: Zimbabwe, Zambia, Tanzania, Kenya, Ethiopia, Nigeria and Ghana; and Madagascar, Democratic Republic of Congo, Cameroon, Cote d'Ivoire and Burkina Faso. The findings have been shared during information sharing workshops in Lomé, Togo and Entebbe, Uganda. In addition, some publications were made under AFF Working Paper Series and shared widely on AFF Website, as already reported on under objective no. 1.

2.5 KEY ACHIEVEMENTS OF OUTCOME 3: AFOLU BASED CLIMATE CHANGE MITIGATION INTERVENTIONS UNDERSTOOD AND APPLIED BY AFRICAN STAKEHOLDERS

This outcome is achieved through the realisation of the following outputs:

(a) Evaluated scope, potential and implementation of pertinent AFOLU mitigation activities and improved understanding thereof
(b) Enhanced understanding of the implementation of REDD+;
(c) Enhanced understanding of the implementation of AFOLU, CDM and voluntary carbon market-oriented activities;
(d) Enhanced understanding of changes in land use in the context of 3 Fs (food, fuel, fibre) and extractive industries.

In view of these outputs, the knowledge generated and shared has strengthened understanding on AFOLU based climate change mitigation interventions among African forestry stakeholders. This has been achieved through studies carried out by several contracted experts, on the aspects covered by the four outputs, and covering the following Anglophone and Francophone countries: Zimbabwe, Zambia, Tanzania, Kenya, Ethiopia, Nigeria and Ghana; and Madagascar, Democratic Republic of Congo, Cameroon, Cote d'Ivoire and Burkina Faso. The findings have been shared during information sharing workshops in Lomé, Togo and Entebbe, Uganda, and in addition, some publications were made under AFF Working Paper Series and shared widely on AFF Website. This has already been comprehensively reported on under section on objective no. 1

2.6 KEY ACHIEVEMENTS OF OUTCOME 4: A BETTER STRUCTURED AFRICAN FORESTRY PRIVATE SECTOR EQUIPPED WITH APPROPRIATE TOOLS TO ADDRESS CLIMATE CHANGE CHALLENGES

This outcome is achieved through the realisation of the following outputs:

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

In this regard, considerable information was generated through studies carried out in Zimbabwe, Kenya, Cameroon and Republic of Congo. The Sida supported project also increased a much broader understanding of the private sector through studies that were undertaken Niger, Burkina Faso, Mali, Nigeria, Cote d'Ivoire, Ghana, Cameroon, Republic of Congo, Democratic Republic of Congo, Ethiopia, Kenya, Sudan, Tanzania, Zambia, Zimbabwe, Malawi and Madagascar.

Therefore, both SDC and Sida supported projects synergistically generated considerable information and shared through documents published under AFF Working Paper Series and a workshop held in Accra, Ghana. The post-workshop evaluation carried out on this showed that African forestry stakeholders in private sector have improved their understanding on climate change issues and how they can take advantage of existing opportunities under the current global, regional and national initiatives tackling climate change in different sectors including forestry.

As an offshoot of these efforts the private sector representatives from West Africa have since formed a WhatsApp information sharing platform among themselves, specifically on marketing and trade in forest products. Together with their colleagues from Central Africa they are now at an advanced stage in establishing a forest products marketing and trade association to facilitate their activities. In this regard they have a constitution and documents to guide the operations of their association. AFF will bring all these to the attention of the ECOWAS Secretariat for further processing and support within this economic community.

Further, forest-based smallholders and small-medium enterprises (SMEs) were equipped with knowledge and skills to develop forest carbon projects, assess/measure forest carbon and apply principles and concepts of carbon marketing and trade in forest carbon projects.

This was achieved through two sub-regional trainings on Rapid forest Stock Carbon Appraisal (RaCSA) that were held in Maputo, Mozambique, for Anglophone and Lusophone Africa, and in Cotonou, Benin, for Francophone Africa. The countries that participated in Maputo training included South Africa, Kingdom of Lesotho, Swaziland, Malawi, Angola, Zambia, Zimbabwe, Mozambique, Tanzania, Uganda, Kenya, Ethiopia, Sudan, Ghana, Liberia and Nigeria. The Francophone countries that were trained in Benin included Madagascar, Niger, Togo, Benin, Cameroon, Cote d'Ivoire, Burkina Faso, Tchad, République de Guinée, Guinée Bisau, Senegal, Mali, Mauritania and Burundi. These have already been reported on in detail.

2.7 KEY ACHIEVEMENTS OF OUTCOME 5: PROFILE OF THE FOREST SECTOR RAISED RELATIVE TO OTHER SECTORS OF THE ECONOMY IN RESPONSE TO THE CHALLENGES OF CLIMATE CHANGE

This outcome is achieved through the realisation of the following outputs:

(a) Policy makers and negotiators from Africa to international processes relating to forests and climate change prepared;
(b) Assessed policies and measures in AFOLU relevant to forestry in African countries;
(c) Countries and regional groupings assisted on policies and other issues on the 3Fs (food, fuel, fibre) in the context of climate change.

The following were achieved:

1. Enhanced the profile of the African forest sector relative to other sectors of the economy in response to the challenges of climate change through the following ways:

   (i) Prepared policy makers and delegates from Africa to international processes relating to forests and climate change. Specifically, AFF Technical Support Team to Raise the Profile of Forestry (TST) organized and trained 76 African delegates during the eleventh (40) and twelfth (36) United Nations Forum on Forests (UNFF 11 and UNFF 12) preparatory meetings. The TST also prepared relevant documents and position paper that supported the African delegates during the UNFF 13. The interventions made by TST enabled the African delegates to better understand MEAs, how to mainstream them in their national policies and activities, in addition to equipping them with skills and strategies for articulating African forestry interests during UNFF 11, 12 and 13 meetings. They developed African Group (AG) common positions during the preparatory meetings organized by AFF to guide them in these meetings. This eventually resulted into the African Group making very good inputs in these meetings that contributed to shaping decisions and policies reached at these meetings.

   (ii) AFF-TST also strengthened the quality inputs by African delegates to the first meeting of the United Nations Forum on Forests (UNFF) open-ended intergovernmental ad hoc expert group (AHEG1) on the strategic plan to implement the international arrangement on forests held on 25 to 27 April 2016 in New York, USA. During this AHEG 1 meeting in New York, the participants explored several important issues related to global forestry including the required strategic approaches and actions to achieve the objectives of the International Arrangements on Forests (IAF), including the mission, vision, communication strategy, possible goals, targets and priority action, the roles of IAF components and the organizational structure of the Strategic Plan; suggestions for the Quadrennial Programme of Work (4POW); possible elements for the framework for reviewing implementation of the Strategic Plan; and the planned follow-up activities leading to AHEG2;

   (iii) Inputs by African delegates to the second meeting of the United Nations Forum on Forests (UNFF) open-ended intergovernmental ad hoc expert group (AHEG2) on the strategic plan to implement the international arrangement on forests held on 24-28 October 2016, in Bangkok, Thailand were strengthened and better articulated through support from AFF-TST. The key areas discussed included: proposals for the Strategic Plan 2017-2030 and the Quadrennial Programme of Work (4OPW) 2017-2020; non-papers on the guiding principles for the inclusion of goals and targets; existing inter-governmentally agreed targets, objectives, goals and commitment on forests; forests' contribution to the Sustainable Development Goals (SDGs); and an indicative list of categories of forest-related data where baseline information is available or can be estimated;

   (iv) Valuable inputs by the AFF-TST to the meeting of the FAO Committee on Forestry (COFO) in Rome, Italy from 18-22 July 2016. During the meeting, the delegates discussed how forests and sustainable forest management can contribute to the achievement of the internationally agreed development goals. COFO also considered how the full potential of forests, including forests

contributions to livelihood, food security, jobs, gender equality and many other global development goals including the 2030 Agenda and the Paris Agreements, can be best be unlocked; and

(v) AFF representatives (from the Secretariat, Climate Change Working Group and TST) attended the United Nations Framework on Climate Change 22nd and 23rd Conference of Parties (UNFCCC COP22 & COP 23); this was in addition to participating in many events relevant to climate change in Africa. This strengthened AFF interaction with many stakeholders resulting in forging alliances with other stakeholders that might in future lead to more opportunities for AFF.

2.8 KEY ACHIEVEMENTS OF OUTCOME 6: POLICIES AND PRACTICES THAT INTEGRATE MITIGATION AND ADAPTATION IN AFOLU IDENTIFIED, PROFILED AND PROMOTED BY AFRICAN POLICY MAKERS

This outcome is achieved through the realisation of the following outputs:

(a) African governments and sub-regional organizations better informed on how to integrate global agreements into forest-related climate change policies and plans;
(b) Countries and sub-regional organizations assisted in developing forest carbon policy including legal framework, institutions and implementation strategy.

In this regard, the following were achieved:

i) Improved understanding on policies and measures in AFOLU and food-fuel-fibre (3Fs) nexus in the context of climate change as related to forestry in African countries. This was achieved through studies covered four sub-regions, in 16 African countries, namely, 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). The findings from Southern Africa, West Africa and Sahel and Central Africa were shared during information sharing workshops in Lomé, Togo and Entebbe, Uganda as reported in objective 1; and

ii) Strengthened capacity of the Anglophone and Francophone African countries on carbon markets and trading with specific focus on forest carbon. This was achieved through national and sub regional trainings of private sector on rapid forest carbon stock appraisal (RaCSA) as already reported on under objective 1. Specifically, during these trainings, a session on legal, policies and institutional frameworks to guide forest carbon markets and trading were discussed. The key areas of focus included forest policy and legislations in various countries, forest governance, national policies for carbon trading, legal issues involved in carbon trading and essential process for developing forest-based policies for carbon trading. As already reported on earlier, the knowledge gained during these capacity building workshops is assisting various countries in developing carbon policies to tap into the existing financial mechanisms, and profile the role of forest sector in implementing defined nationally determined contributions (NDCs) that integrate both mitigation and adaptation strategies and activities.

CHAPTER 3: MANAGING FINANCES AT AFF

All funds received by AFF are kept in bank accounts corresponding to the donor. Since AFF has sourced financial services from ICRAF, a transfer of funds is sent by AFF to ICRAF as the AFF balances maintained by ICRAF are exhausted. AFF undertakes monthly bank reconciliation of all funds in its bank accounts.

For all AFF activities, the Senior Finance Officer at AFF initiates a funds transfer to ICRAF, with the approval of the Executive Secretary of AFF, to disburse the required funds, and keeps track of use of the funds. All payments are processed through ICRAF with the approval of the Executive Secretary.

The Senior Finance Officer prepares a Financial Statement for annual financial audits as, the preparation of such statements is the responsibility of AFF. In preparing this statement, AFF has the responsibility for, among other matters:

- Establishing and maintaining effective internal control over financial reporting that could, among other things, facilitate the detection of any significant deficiencies and material weaknesses in the design or operation of internal controls that could adversely affect organization's ability to record, process, summarize and report financial data;
- Identifying and ensuring that AFF complies with the laws and regulations applicable to its activities;
- Properly recording of transactions in the accounting records;
- Safeguarding AFF's assets;
- Selecting and applying appropriate accounting policies; and
- The overall accuracy of the financial statements and their conformity with ISA 800.

3.1 HIGHLIGHTS ON BUDGET AND EXPENDITURE FOR SDC SUPPORTED PHASE 2 PROJECT

AFF received US $ 4,595,955 out of the total budget of US $ 5 million that was disbursed as follows: US $ 1,689,959 in 2015, US $ 1,336,814 in 2016 and 1,569,182 in 2017 that extended to 31 May 2018. AFF incurred a cumulative currency exchange loss of US$ 203,895 of the total amount received during the project phase. Overall, AFF has ensured prudent management of funds disbursed from SDC to undertake various project activities corresponding to different outputs and outcomes (Table 6).

Table 6. Financial report for the Period 01January 2015 to 31 May 2018

	Total Budget 1-Jan-15 31-May-18 US$	Total Expenditure 1-Jan-15 31-May-18 US$	Total Variance US$	Percentage Variance %
Funding received 2015-2017		4,595,955		
Total funds received		**4,595,955**		
Outcome 1				
Output 1.1	274,000	273,676	324	0%
Output 1.2	150,000	149,069	931	1%
Output 1.3	744,000	797,889	(53,889)	-7%
Outcome 2				
Output 2.1	135,000	133,005	1,995	1%
Output 2.2	144,000	143,682	318	0%
Outcome 3				
Output 3.2	44,000	42,594	1,406	3%
Outcome 4				
Output 4.1	249,000	247,654	1,346	1%
Output 4.2	135,000	136,658	(1,658)	-1%
Outcome 5				
Output 5.1	430,000	287,369	142,631	33%
Output 5.3	208,000	152,556	55,444	27%
Technical staff Costs				
Executive Secretary (shared with Sida)	123,250	123,755	(505)	0%
Senior Programme Officer	287,000	275,845	11,155	4%
Senior Programme Officer (shared with Sida)	54,750	45,243	9,507	17%
Programme Officer	246,000	246,523	(523)	0%
Planning Monitoring Evaluation and Reporting Specialist (shared with Sida)	15,000	14,957	43	0%
Annual staff benefits	586,000	590,909	(4,909)	-1%
Finance and Administration costs				
Administrative Officer (Shared with Sida)	36,000	31,090	4,910	14%
Equipment, supplies, finance and administrative services	450,000	453,891	(3,891)	-1%
Programme Management Costs				
Forum Governance	136,000	135,920	80	0%
Audits, Evaluations, Steering committee and planning meeting.	174,000	138,052	35,949	21%
Staff travel	140,000	104,999	35,001	25%
Overhead and unforeseen costs	239,000	238,919	81	0%
TOTAL	**5,000,000**	**4,764,257**	**235,743**	
Funds balance 31st May 2018		**(168,302)**		

1. The unspent budget of US$ 235,743 in the financial report is accounted for by the cumulative exchange loss realized of US$ 203, 895, an amount of US$ 31,141 settled by SDC, bank deductions of US $ 150 as transaction charges on funding received and the unspent amount of $ 557;

2. Cost incurred on the consultants hired to conduct the external review of the project in 2017 amounts to $ 31,141. This has been incurred and expended from the donor's end and SDC will deduct it from the final disbursements due to AFF; and

3. In reference to the agreement between SDC and AFF an amount of $ 200,000 is due as a final payment to AFF, however factoring in the amount of $ 31,141 in note 1 & 2 above and the unspent amount of $ 557, the funds balance of $ 168,302 is the final payment due to AFF excluding anticipated bank charges on this final installment. The bank charges have consistently been $ 25 for every installment.

Overall assessment on based on the financial report (Table 6) shows that the project phase has ably achieved its objectives despite a limitation that came with a fluctuating trend of the Swiss Franc against the US dollar in the years 2015, 2016 and the beginning of 2017 at the times when funding disbursements were received by AFF.

AFF has managed to achieve the set objectives by concentrating resources on more demanding Outcomes such as Outcome 1 and mitigating the spending on others such as Outcome 5. This has been possible by exploiting synergies between activities across different outcomes that could be implemented together and possibly by one contracted expert. Also, the employment of postgraduate students has been cheaper as compared to the engagement of independent experts to undertake similar tasks. Therefore ‘savings’ realized on some activities were channelled to other activities. This has promoted cost efficiency. A transfer of funds between budget lines that exceeds the allowable limit was done in consultation with and approval by SDC.

Synergies have also been achieved between the SDC and Sida funded projects, where one project funds the initial part of an activity such as studies done to generate knowledge products, and then the other project funds the sharing of the knowledge products generated with various stakeholders.

3.2 KEY HIGHLIGHTS ON FINANCIAL AUDIT

The project phase underwent annual audits by an external auditor as agreed with SDC. The audits were conducted in adherence to the terms of reference recommended by the donor. In 2015 and 2016 the audits were carried out by PricewaterhouseCoopers (PwC), whereas in 2017 the audit was done by Deloitte. All audit reports were very positive to AFF, in that they gave the institution a clean bill on financial and management of financial resource from development partners, i.e. SDC and Sida. Financial reports for the three years have been submitted and approved by SDC. An audit of the no-cost extension has been planned in the month of July 2018 to be carried

out by Deloitte, therefore the audit report will be submitted to the donor at the end of July 2018.

The frequent audit exercises continue to add value to financial management given the external financial management review role played by the audit firms engaged. AFF takes audit recommendations positively and implements them promptly.

3.3 APPLICATION OF LESSONS LEARNED

The management of finances and resources at AFF in accordance to international standards has enabled the institution draw some lessons with important applications as follows:

1. AFF should continuously monitor and review its financial performance against the achievement of planned objectives to ensure a balance in the achievement of its overall project goal at any given time; and

2. AFF also needs to continuously scan its activities to take advantage of synergetic opportunities not only within individual projects, but also in relation to other projects within the institution.

CHAPTER 4: LESSONS LEARNED AND CHALLENGES ON IMPLEMENTATION OF THE PROJECT

During the project implementation period, some key lessons and challenges were observed that contributed in one way or another to the level of achievements realised.

4.1 KEY LESSONS LEARNED DURING PROJECT IMPLEMENTATION

i) The involvement of students in the implementation of project activities created new avenues for AFF to partner with higher learning African institutions that resulted in building the capacity of the students, building the capacity of the training institutions and building the capacity of the institutions that employed them. Overall this strengthened the capacity of African forestry stakeholders to handle forestry issues in the context of climate change. It also created opportunities for joint research and other related forestry and environmental issues in Africa.

ii) Media engagement during dissemination of study findings through workshops, conferences and other avenues remained useful in reaching wider audiences in and outside the continent in a cost-effective manner. This is expected to further change the mind-set and attitude towards forestry, possibly resulting in an effective planning and management of forest resources by both public and private sector.

iii) The components addressed by the project in each outcome remain relevant for Africa, not only during the project cycle but also in the medium to long term 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 of development in the continent. They require further support to enhance sustainable forest management and also internalize climate change in development.

iv) The introduction of harmonisation methodology workshops before AFF experts engage in the implementation of the project activities proved to be very valuable in quality control of the work from the consultants and in synthesizing results across sub-regions. This did not only help in harmonising several issues as outlined in the terms of reference but also provided a comparative advantage among sub-region and country-based studies that can be distilled to provide African outlook.

v) AFF publications in a special journal issues elicited wider readership not only in Africa but also outside the continent. This demonstrated a demand for forestry science that AFF should capitalize on in addressing African forest and tree resources-based issues.
vi) Valuable experiences gained by AFF Secretariat staff through engagement of AFF by other development partners such as FAO, AUC, UNFF and African universities, among others, in working jointly on some forest-based issues and activities like: development of Sustainable Forest Management Programme Framework for Africa; student supervision. This also increased AFF's reach and influence.
vii) There is a very limited and inadequate capacity among African professionals to undertake climate change modelling and scenario development in the context of African forestry.

viii) There is minimal internalization, by the African private sector in forestry, of climate change issues in its policies, plans and work. This underlines the urgency to develop this critical capacity given that the African national economies are private sector led and function in a market environment in which the private sector is a key player.

ix) Training/retooling courses on rapid forest stock carbon appraisal (RaCSA) is receiving considerable attention and demands from key stakeholders in forestry. However, most of the African countries have not invested much in capacity building to develop carbon projects and participate in the global compliance and voluntary carbon markets and trading. This is another key area that requires capacity building.

x) African countries piloting REDD+ projects have shown multiple benefits from the carbon projects that also promote sustainable forest management and enhancement of carbon stocks. However, failure to develop suitable national frameworks on carbon benefit sharing may reverse the expected returns of such projects if implemented at national scale and different levels. Further, markets for forest carbon have yet to be developed within the countries themselves, making forest carbon sales difficult in the few global markets. These issues require the development of proactive initiatives to ensure the sustainability of such projects.

xi) AFF remains a key focal entity in generating and sharing information and experiences across the continent on forestry as related to climate change. This positions AFF strategically to facilitate the implementation of various forest-based mitigation and adaptation programmes identified in Nationally Determined Contributions (NDCs) and other areas with relevant partners at national and sub-regional levels.

4.2 CHALLENGES ENCOUNTERED DURING PROJECT IMPLEMENTATION PERIOD

i) Untimely delivery of some deliverables such as technical reports, journal paper manuscripts, policy briefs and factsheets by contracted experts required frequent

engagement of the technical staff at the Secretariat to follow-up on this through different means of communication. Sometimes this resulted into delays in reviewing and dissemination of the findings as originally planned. In addition, there is one case where the consultant failed to deliver on assignment since formal contractual engagement to the end of the project period.

ii) Weaknesses in the technical writing skills of some of the experts engaged in project activities. This has often pushed the technical staff at Secretariat to spend a lot of quality time re-working the reports and other knowledge products to meet the minimum standards before sharing widely.

iii) Prolonged implementation of the assignments by the consultants beyond stipulated time due to reasons such sickness, travel schedules by the consultant/experts who are also working in their respective institutions, among others.

iv) Overstretching of the technical staff at Secretariat managing and implementing the project because of all the above three shortcomings that resulted, in some cases, in delays in reviewing and providing feedback on the deliverables/outputs to the consultants/experts engaged in the project implementation.

v) Underestimation, by contracted experts, of the time some tasks might require, resulting to delays in delivery of expected products.

vi) Inability to access reliable data by the consultants. This is partly a demonstration that, in some cases, African countries have not invested appreciably in data collection and management.

4.3 IMPLICATIONS OF LESSONS LEARNED, AND CHALLENGES EXPERIENCED DURING PROJECT IMPLEMENTATION PERIOD

The highlights on the lessons learned and challenges encountered provides AFF with following opportunities to improve the way it operates in future:

i) AFF to engage with development partners to continue building capacity in Africa on forest based NDCs in the context of mitigation and adaptation programmes that will be developed and implemented by African countries;

ii) AFF to strengthen its engagement with private sector in the context of public-private-partnership (PPP) to promote forest-based environment sensitive enterprises that create employment opportunities for improved livelihood and economy;

iii) AFF to establish a media chapter to enhance collaboration with the media and facilitate better dissemination of forestry and climate change information from the institution;

iv) Build capacity on scientific writing skills to selected AFF members;

v) Strengthen the already established team of experts that review reports submitted by consultants, to assist technical staff at the Secretariat, before submitting them independent reviewers and finalization for dissemination;

vi) Strengthen the capacity of technical staff at the Secretariat to manage various disciplines in the forestry and climate change to effectively support the various programmatic areas of the institution; and

vii) Investment in forestry data collection and management as a means for addressing information scarcity on some key areas and issues on the continent.

CHAPTER 5: IMPACT OF PHASE 2 ON AFF AS AN INSTITUTION

The achievements realized in each of the project objective and outcomes have also direct impact on the growth and stability of AFF. It's evident that the support received from SDC to AFF during the pre-phase and Phase I that culminated to Phase 2 have significantly strengthened the institution in several ways that have resulted to improved visibility, recognition and respect for AFF in Africa and at a global level. The implementation of various project activities in partnership with various organisations and institutions at national, sub regional, regional and global levels have strategically positioned AFF in handling African forest issues in the following ways among others.

i) Improving synergies with international, regional, sub regional and national institutions to address forestry and climate change;
ii) Strengthening the level of institutional governance to guide and support various operations of AFF;
iii) Improving visibility, recognition and respect for AFF as a credible institution at various levels;
iv) Establishment of strategic partnerships with different institutions;
v) Restructuring the work of AFF into programmatic areas;
vi) Strengthening synergies between donor supported activities at AFF.

The following are some key highlights on each of these impact areas.

5.1 IMPROVING SYNERGIES WITH INTERNATIONAL, REGIONAL, SUB REGIONAL AND NATIONAL INSTITUTIONS TO ADDRESS FORESTRY AND CLIMATE CHANGE

AFF, together with African Group, has remained a voice for African forestry in international negotiations and discussions organized by international organisations and initiatives like UNCCD, UNCCD, UNFF and the FAO-COFO, among other entities to which AFF is accredited. It has also championed implementation of critical plans and activities that also feature in the policies and plans of various regional and sub-regional grouping such as AUC, ECOWAS, ECCAS, COMIFAC, EAC and SADC. For example, AFF is the lead institution in the implementation one of the seven pillars of the "Convergence Plan for the Sustainable Management and Conservation of Forest Ecosystems in West Africa" coordinated by the ECOWAS Secretariat. AFF is responsible for coordinating activities under the pillar on "Information, education and communication". It also contributed to the development of a "Forest Management and Protection Bill 2015" by EAC, that among other things seeks to facilitate the management of forest resources in the EAC region in a sustainable manner. It also supported SADC, in partnership with

UNFF Secretariat, to build capacity of member states on developing bankable project proposals to facilitate soliciting financing for strengthening sustainable forest management in the sub region. AFF has equally supported AUC, in partnership with FAO, to develop a “Sustainable Forest Management Programme Framework for Africa” that Heads of African States required AUC to develop. AFF is also expected to support its implementation.

The AFF-HALF scholarship programme, hosting of sabbatical fellows and provision of research grants to postgraduate students from African universities enhanced synergies on capacity building at the institutional and continental levels. The opportunity offered to selected candidates enabled them to address critical gaps that exist in forestry and climate change whose impact is long term. These basic interventions strategically position AFF to take advantage of global and regional initiatives to address forestry in the context of climate change. It was for example evident from an external review of the project that there are no other African initiatives that are like those of AFF. This implies that AFF has identified and cultivated its own niche in African forestry and will remain unique in promoting African forestry in the continent, including championing developments in the forestry-climate change nexus, with a view to improve livelihoods and environmental sustainability on the continent. For example, AFF is now a strategic partner in promoting North-South cooperation in addressing forestry and climate change in African forestry.

5.2 STRENGTHENING LEVEL OF INSTITUTIONAL GOVERNANCE TO GUIDE AND SUPPORT VARIOUS OPERATIONS OF AFF

The SDC support to AFF has contributed to strengthening the overall governance of the institution. AFF has been able to hold regular meetings of the Governing Council and of its five committees, namely the Executive Committee, The Climate Change Working Group (and its Expert Panel on Climate Change), Technical Support Team to Raise Profile of Forestry, Task Force on Resource Mobilization and Finance Committee. These committees have done very commendable work in providing policy and expert guidance on the climate change of AFF as well as guiding the development of the Programmatic Approach to the work of AFF, developing a strategy for mobilizing financial resources for AFF, checking on financial management at AFF, examining and approving work plans, budgets, financial and operational reports, monitoring staff development at the Secretariat, among other issues.

AFF established a Project Steering Advisory Committee (PSAC) to support and guide the development and management of its projects, in addition to providing quality assurance for project outputs.

Further, AFF has established a Project Monitoring, Evaluation and Reporting Unit, that among other duties provide guidance to project development and monitoring the uptake of project outputs and achievement of expected outcomes and impact. Also, AFF has

established a Knowledge Management and Communication Unit that, among other things, handle the various communication vehicles employed by AFF to share its knowledge products. These include the website, social media, info mail, media houses, and printed material. These two specialized units have each developed a strategy to guide its operations. Also, the Finance and Administration Unit has been considerably strengthened and requires minimal supervision from the Executive Secretary.

During this project phase period AFF organized in 2016 a Members' Forum. This is a meeting of members of AFF that is organized electronically once every five years to approve all major decisions made by the Governing Council on its behalf, propose new areas of work or emphasis by AFF, among others. The Member's Forum is the apex governing body of AFF but since it does not meet regularly it delegates a lot of responsibilities to the Governing Council. However, since the Governing Council meets only once in a year it delegates many responsibilities to the Executive Committee and less to the other committees.

The external review of this project phase proposed on a number of areas that AFF needs to focus on to enhance its effectiveness in forestry and climate change. Some of these include, developing structures that will enable active engagement of members at grass root level by restructuring AFF governance such that there is representativeness at sub regional level (possibly through sub-regional forestry associations), and establishment of national chapters to which individual members will adhere to, opening more activities to the non-forest sectors, inclusion of corporate institutions at the Governing Council and involvement of more youth and women as well as non-foresters to enhance effectiveness on AFF's operations. Nearly all these recommendations have been acted on including the establishment of "Women in forestry" and "Youth in forestry" chapters within the structure of the Governing Council.

All the above activities demonstrate the contributions this project phase made in strengthening AFF as an institution.

5.3 IMPROVING VISIBILITY OF AFF AT VARIOUS LEVELS

The SDC support to this phase has facilitated the generation of various knowledge products such as journal articles, documents published under AFF Working Paper Series, factsheets, policy briefs, training compendiums, monographs, training modules and books that have been shared widely. As reported earlier AFF reached over 5.2 million people from over 200 countries through electronic and printed media.

AFF has also held several training and information sharing workshops as well as supporting AFF Technical staff at the Secretariat and various members of committees of the Governing Council to participate in relevant workshops, conferences, training and other assignments to support African countries in different ways. These and other engagements have significantly improved the profile of AFF as institution in different levels as already alluded to under the section for objective 1.

Further, AFF is accredited to COPs of UNFCCC and UNCCD as well as sessions of UNFF and AMCEN. This provides an opportunity for the institution to be heard at both the regional and global levels.

5.4 ESTABLISHING PARTNERSHIPS WITH VARIOUS ORGANIZATIONS

AFF established a number of MoUs with various organisations and institutions because of the various project activities that were implemented during the project period. This has already been reported on adequately under the section for objectives 1 and 2. The MoUs are effective beyond the period of project phase implying that there is room for further engagement with such institutions on areas outlined in the MoUs.

5.5 RESTRUCTURING OF AFF OPERATIONS INTO A PROGRAMMATIC APPROACH

Since its establishment, AFF has provided a bridge between science-based knowledge and strong policies to support sustainable forest management (SFM); effectively working within a science-policy-management framework. As awareness has grown on the roles of forests and trees in national economic development, livelihoods and environmental stability, AFF has steadily gained membership and capacity to work within this framework.

However, with the continued increasing demands on the forest and tree resources that also come with many players in the sector, the necessity for a much clearer mapping of issues, opportunities and challenges that bear on the sector becomes a prerequisite for the institution to have a clearer vision of the future and therefore define a path to follow, using the resources it can muster, in order to create the desirable changes in the society and to the state of these resources.

Given this scenario, AFF re-casted its approach to conceiving and managing its work through a programmatic approach that has seven programme areas, namely:

1. Better management of forests and trees outside forests;
2. Forests and trees in economic development and poverty eradication;
3. Contribution of forests and trees to environmental health;
4. The contribution of forests and trees to food and nutrition security;
5. Policies and governance;
6. Capacity building and skills development
7. Information management and impact assessment

In developing this programmatic approach AFF considered the dynamism that characterizes the forestry sector, and by examining what the society wants from the forest and tree resources and what potential responses can be made to these demands. In doing this, AFF is taking into account the opportunities and strengths within the

African forestry sector on the one hand and weaknesses and threats to the sector on the other, in addition to the strengths and opportunities within AFF itself. It is also guided by its own strategy and the priority areas of action identified by the African forestry fraternity.

5.6 STRENGTHENING SYNERGIES BETWEEN DONOR SUPPORTED ACTIVITIES AT AFF

The support received from SDC and Sida complemented each other on some common activities developed through such support; for example, in reaching more countries or actors thus expanding the sample size or reach, and in undertaking some activities with one donor support and sharing the information generated through workshops and other media supported by the other donor. As such AFF effectively took advantage of such synergies between the projects. The two projects also supported the building of staff capacity at the Secretariat who then worked together in supporting the execution of all project activities. For example, the recruitment of specialized staff in PMER, knowledge management and communication strengthened the operations of AFF in ways that resulted to improved planning, monitoring and reporting on project activities as well as on communication of AFF's outputs and assessment and reporting on achievement of outputs, outcomes and impact.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 CONCLUSION

The implementation of various project activities resulted in raising the profile of African forestry in the face of climate change. The number of outputs and outcomes addressed in this project phase improved the overall capacity of African stakeholders in addressing the impacts of climate change and variability to forests, tree resources and people who depend on these resources. It also prepared African stakeholders in seizing the opportunities associated with climate change. Specifically, through this project, AFF prepared countries on their effective participation during MEAs processes and other related initiatives and processes, in addition to building their capacity to mainstream decisions and recommendations emanating from the same into their forestry and climate change policies and activities. It also enhanced capacity to governments, private sector and civil society organisations in development of forest carbon projects to tap climate financing and participate in compliance and voluntary carbon offset markets and trading. This resulted to increased level of awareness on the importance of forests and tree resources to livelihood sustenance and mitigation as well as adaptation to climate change.

The various knowledge products generated from this project will go a long way in supporting African countries to develop or strengthen appropriate policies and institutional frameworks to support the forestry sector, and also its response to the impacts and challenges of climate change. The training compendiums developed on basic science of climate change, climate modelling and scenario development, international dialogues, processes and mechanisms of climate change and carbon markets and trade will, for a long time, guide the delivery of forestry education and training on the continent, in a structured and effective manner, that is related to climate change in forestry.

The knowledge generated on trends of forest cover and drivers of land-use change in the context of 3Fs, vulnerability and impacts of climate change and variability on forests, trees and people who depend on them with specific focus on gender-sensitive assessment, adaptation and mitigation policies, AFOLU based climate change mitigation, implementation of REDD+ and CDM activities, and voluntary carbon markets, role of private sector in African forestry in response to climate change and policies addressing integration of mitigation and adaptation options will not only support the African countries in strengthening the forestry sector but also provide support to the implementation of Africa Agenda 2063 and implementation of the Sustainable Development Goals.

All project objectives were achieved.

6.2 RECOMMENDATIONS

The following recommendations were drawn from the overall implementation of the project and periodical evaluation feedbacks:

i) The developed compendiums on climate change for professional, technical and short courses training in African forestry is of its kind and unique in Africa. There is a need for AFF to pilot these training compendiums with various institutions and organisations in Africa in order to promote their uptake so as the intended capacity building among African forestry stakeholders is achieved;

ii) The African capacity in addressing climate modelling and scenario development with applications to forestry sector is still weak. There is a need to enhance capacity development in this area in order to strengthen implementation of forest-based policies in the context of climate change;

iii) The private sector in African forestry hardly addresses climate change, except in very few countries. AFF and other partners need to facilitate strengthening the African private sector in forestry since the private sector is at the core of Africa's economic development. This is in addition to its role in promoting sustainable forest management and the necessity to internalize climate change in its operations;

iv) Public-private-partnerships (PPP) in forestry is still an evolving concept. There is a need for validating promising PPP models identified through the two projects to enhance sustainable management and use of forests and tree resources for improved livelihood and environmental stability;

v) AFOLU based mitigation and adaptation options examined by the project are showing promising impacts on people and biophysical ecosystems. There is a need to strengthen policies and institutional frameworks for better integration of mitigation and adaptations options through validation and promotion of promising AFOLU interventions;

vi) The impact of climate change on the African forestry sector is still unfolding and as such AFF and its strategic partners need to continue to monitor and work on evolving issues in this area, as well as facilitate building the required capacity in addressing new and emerging climate change issues in the forestry sector; and

vii) The knowledge gained through the implementation of various project activities forms a very good baseline for AFF and its development partners to develop/design and implement pilot projects on climate change at community/local levels to address the challenges and impacts of climate change and variability. The success of such projects need to be up-scaled for wider impacts.

ANNEXES

ANNEX 1. LIST OF SOME KNOWLEDGE PRODUCTS IN FORESTRY AND CLIMATE CHANGE

1. Publications under AFF Working Paper Series

(i) Policies and other related issues to the nexus food- fuel-fibre production in the context of climate change in Southern Africa
(ii) Policies and other related issues to the nexus food- fuel-fibre production in the context of climate change in West Africa and Sahel
(iii) Food-fuel-fibre production policies and strategies in the context of climate change in Central Africa
(iv) Implementation of REDD+, CDM and AFOLU INDC in Francophone Africa
(v) Implementation of REDD+, CDM, AFOLU INDC and voluntary carbon related activities in Anglophone Africa
(vi) Strengthening adaptation policies and AFOLU based climate change mitigation interventions relevant to African forestry and people in Anglophone Africa
(vii) Strengthening adaptation policies and AFOLU based climate change mitigation interventions relevant to African forestry and people in francophone Africa
(viii) Role of African forestry private sector in response to climate change in Zimbabwe
(ix) Role of African forestry private sector in response to climate change in Kenya
(x) Role of African forestry private sector in response to climate change in Central Africa: Case study of Republics of Congo and Cameroon

2. Journal articles

(i) Chirwa, P.C., G. Kowero., Larwanou, M (2017). Forests, people and environment: some African perspectives. Southern Forests: a Journal of Forest Science Vol 79

(ii) Chirwa, P.C., Larwanou, M (2017). Overview of restoration and management practices in the degraded landscapes of the Sahelian and dryland forests and woodlands in East and Southern Africa. *Southern Forests: a Journal of Forest Science Vol 79*

(iii) Vincent O. Oeba., Larwanou Mahamane., Samuel C.J. Otor., James B. Kung'u., Muchiri N. Mbae (2017). Growing common plantation tree species in Kenya for sale of carbon and wood supply: What is the best bet? *Southern forests, a Journal of Forest Science, Vol 79:1-8*

(iv) Vincent O. Oeba., Larwanou Mahamane., Samuel C.J. Otor., James B. Kung'u., Muchiri N. Mbae (2016). Estimation of aboveground and belowground carbon

sequestration of *Cupressus lusitanica, Pinus patula* and *Eucalyptus saligna* plantation species in Kenya; *Researchjournali's Journal of Forestry Vol.3 No.6.*

(v) Pauline Bala., Giathi Gitehi., Oeba Vincent., Stephen Fredrick Omondi., Luvanda Albert., Michael Okeyo (2017). Effect of seasonality, graft type and scion characteristics on propagation of *Vitex payos* in the drylands of Kenya. *Journal Horticulture and Forestry, Vol. 9(6), pp. 49-58.*

(vi) Moussa Massaoudou., Larwanou, Mahamane (2016). Characterization of tree stands in *Faidherbia albida* (Del) A. Chev. and *Prosopis africana* (Guill., Perrot and Rich) Taub. Parklands of South-central Niger; *Journal of Applied Biosciences 94:8890 – 8906*

(vii) Moussa Massaoudou., Larwanou, Mahamane (2016). Resilience to stress of woody species in Faidherbia albida (Del) A. Chev. and Prosopis africana (Guill., Perrot and Rich.) Taub. parklands in the Sahelian Niger: Journal of Biodiversity and Environmental Sciences (JBES) ISSN: 2220-6663 (Print) 2222-3045 (Online) Vol. 8, No. 3, p. 107-124 http://www.innspub.net;

(viii) Moussa Massaoudou., Larwanou, Mahamane (2016). 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.

(ix) Abdourhamane Hamidu., Morou Bouble., Larwanou Mahamane., Mahamane Ali., Saadou Mahamane., Ronald Bellefontaine (2015). Uses and preferences of woody species in two protected forests of Dan Kada Dodo and Dan Gado in Niger; ol. 7(6), pp. 149-159, DOI: 10.5897/JHF2014.0374

3. Book chapters

(i) 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. In Leal Filho, W., Simane, B., Kalangu, J., Menas, W., Munishi, P, Musiyiwa, K. (Eds) (2017) Climate Change Adaptation in Africa - Fostering Resilience and Capacity to Adapt. Springer, Berlin. ISSN 1610-2010 ISSN 1610-2002 (electronic) ISBN 978-3-319-49519-4 ISBN 978-3-319-49520-0 (eBook) DOI 10.1007/978-3-319-49520-0 Library of Congress Control Number: 2016960722. http://link.springer.com/chapter/10.1007/978-3-319-49520-0_10;

(ii) P.N.M. Njeru., J. Mugwe., I. Maina., M. Mucheru-Muna., D. Mugendi., J.K. Lekasi., S.K. Kimani., J. Miriti., Vincent O. Oeba., A.O. Esilaba., E. Mutuma., K.P.C. Rao, F. Muriithi (2015). *In Leal Filho W., Esilaba, A.O., Rao, K.P.C., Sridhar, G. (Eds), Integrating Farmers and Scientific Methods for Evaluating Climate Change*

Adaptation Options in Embu County. *Adapting African Agriculture to Climate Change. Transforming Rural Livelihoods, XI 233p Ilus. Hardcover. ISBN 978-3-319-12999-0;*

(iii) Henry Neufeldt., Pablo Pacheco., Hemant R. Ojha., Sarah Ayeri Ogalleh., Jason Donovan., Lisa Fuchs., Daniela Kleinschmit., Patti Kristjanson., Godwin Kowero., Vincent O. Oeba., and Bronwen Powell (2015). In Bhaskar Vira., Christoph Wildburger and Stephanie Mansourin (eds). Public sector, private sector and socio-cultural response options. Forests and Food. Forests, Trees and Landscapes for food security and nutrition ISBN 978-3-902762-40-5 ISSN 1016-3263; Published by International Union of Forest Research Organization (IUFRO)

4. **Abstracts of scientific proceedings**

(i) 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

5. **Articles presented in scientific conferences**

(i) Vincent O. Oeba and Larwanou Mahamane (2015). Opportunities and prospects of forest based CDM and REDD+ projects for sustainable development in Sub-Saharan Africa. 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, Victoria Fall, Zimbabwe"*

(ii) Vincent O. Oeba., Choge Simon., Kiama Stephen (2015). Prospecting Prosopis for carbon trade and market in Kenya: Untapped potentials: 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.

6. **Manuscripts for a special issue with International Forestry Review**
Title of a Special Issue with the International Forestry review: *The Forestry Sector and other Land Uses in Climate Change in Africa*

(i) Agriculture, forest and other land uses on intended nationally determined contributions (AFOLU INDC): outlook for Africa
(ii) Can CDM and REDD+ Help to Develop Africa? An evaluation of successes and failures of implementing CDM and REDD+ in Africa
(iii) Climate adaptation pathways in forestry sector of Africa
(iv) Pathways for harmonizing forest-related climate change adaptation and mitigation in Africa
(v) Food-fuel-fibre production policies and strategies in the context of climate change in Central Africa

(vi) Climate change in West Africa: Nexus of food-fuel-fibre
(vii) An overview of the development of fuelwood in southern Africa: opportunities and challenges
(viii) Forestry sector engagement in climate change action: the role of public and private sectors in Zimbabwe
(ix) Role of African private forestry sector in response to climate change in Kenya
(x) Role of African forestry private sector in response to climate change in central Africa: Case of Cameroon

7. Factsheets

(i) Role of African forestry sector in response to climate change: case of Zimbabwe
(ii) African forestry private sector in response to climate change
(iii) Circumstances that enable wider adoption of good forest practices in climate change adaptation and mitigation in Sub-Saharan Africa
(iv) Role of Kenya's forestry private sector in response to climate change
(v) Biofuel crop and woodfuel production: absence of sustainable policies and strategies is a threat to Central African forests
(vi) Food-fuel- fibre production nexus in forest and Sahel zones of West Africa
(vii) Reducing risk and enhancing benefits of forest-based climate change adaptation and mitigation in Africa
(viii) Professionals in Sierra Leone trained on carbon projects and accounting of forest carbon
(ix) Status on implementation of REDD+, CDM and Voluntary Carbon markets and Trading in Anglophone Africa: Uptake conditions and challenges
(x) Rapid carbon stock appraisal for supporting carbon markets in Liberia

8. Policy briefs

(i) Food-fuel-fibre production policies in the context of climate change in Central Africa: A focus on biofuel
(ii) Nationally determined contributions of African countries: Prospects in the AFOLU sector
(iii) Climate resilient adaptation and mitigation pathways for Africa's AFOLU sector
(iv) Policy issues and actions in Africa must undertake on REDD+, CDM, AFOLU and voluntary carbon markets and trading
(v) Empowering extension services in Sub-Saharan Africa on forest carbon development
(vi) Policy focus on food- fuel-fibre production nexus and climate change in West Africa
(vii) Climate change and the private forestry sector in Central Africa: Improving the role of private sector in climate change
(viii) Role of private sector in forestry as relates to climate change in Zimbabwe
(ix) The role of the private sector in response to climate change in Kenya
(x) Developing forest carbon projects in Liberia: Experiences from RaSCA training workshop
(xi) Exploring the hope towards accessing carbon credit for Sierra Leone

African Forest Forum

A platform for stakeholders in African forestry

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