Regional Expert Consultation Workshop on Forest Education in Anglophone Africa

Summary report

02 February 2021

Creation of a Global Forest Education Platform and Launch of a Joint Initiative under the Aegis of the Collaborative Partnership on Forests
Regional Expert Consultation
Workshop on Forest Education in Anglophone Africa

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The Food and Agriculture Organization of the United Nations
Rome 2021
Acknowledgement

The authors would like to highly appreciate and thanks everyone who participated in the regional consultation workshop on forest education for English-speaking countries. Special thanks to Susan Braatz, Soalandy Rakotondramanga and Nora Berrahmouni for their valuable inputs in making the consultation a success. The authors would like to thank Pantaleo Munishi, Felicity Blakeway, James Ole Kiyiapi, Wilson Kasolo, Margaret Mwaura, and Hewson Kabugi for their presentations as key experts in different fields. Special appreciation to Jorum Kagombe, James Kairo, Bekuta Balodi, Bethsheba Muchiri and Wilson Kasolo for rapporteuring various sessions. The authors would like to highly appreciate Stephen B. Mattia, Oladoye A. Olusegun, Benson Nwajiobi, Moses Fayiah, Ibrahim Inusa, Sifon Odeleye, Abdulai Barrie, Ilhem Lil, Leah Wanambwa Naess, Edward Kilawe, Fred Marani, Daniel Makokha, Fauzia Ahmed, Zimbili B. Sibiya, Rachel Obiro, Peter Sirayo, Owen Sseremba, Sampha Sesay, Scovia Akello, Kamuhelo Lisao, Muhanguzi M. Geoffrey, Iddah Wawie, Peter K. Waweru, Wani J. H. Momo, Cameron Hayes, Francois Oberholzer, Iveren Chenge, Yuninui Valentine, Maryanne Kuria, Alice Adongo, Doris Mutta, Floris Atem, Olukanni Bosede, August B. Temu, Arabomen Joy, Dilmi Amal, Thomas Gichuru, Olivia Agbenyega, Joy Crane, Godwin Kowero, Taylor Montgomery, Kerry Davies, Ibrahim M. Ahmed, Grace A. Nchimbi, Joyce Lepetu, Alex Onatunji, Mr. Ghaamid Abdulbasat, Gbessay E. S. Momoh, Zainab, Erasmus N. Tetteh, Oluwadamilola Ogundipe, Folaranmi Babalola, Aiita J. Apmaku, William Liyai Mwondi, Gladys Durojaiye, David Castellan, Stephen M. Ndung’u, John Ngugi, Yusuf Mansaray, Mezgebu S. Duguma, Sinethemba Sidloyi and Ahlem Abdelbaki for their contributions in making the workshop a success. Isaac Kuria is highly appreciated for his assistant in managing the workshop.
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1. Preface

a. Aims and goals of the regional consultation workshop

The goal of the regional consultation was two-fold. One to gather input from regional experts working in Africa on the status and needs of formal and non-formal forest education, and to identify concrete actions that need to be taken to strengthen it. The findings were to be used to enrich the regional assessment reports. In addition, the input gathered from the workshop will be used to contribute to the work of the African Forestry and Wildlife Commission (AFWC) working group on forestry and wildlife education and profession.

b. Organizational information, location, focus of the sessions, topics of discussions

A virtual workshop for Anglophone countries was held on February 2, 2021 and was opened by Prof. James B. Kung’u, the Executive Secretary of ANAFE (African Network for Agriculture, Agroforestry and Natural Resources Education) at 10.44 am, Nairobi time. He welcomed the participants to the workshop who were from East, Central and West Africa and outlined the programme for the day. He also highlighted the participating partners in the study, who included the Food and Agriculture Organization of the United Nations (FAO) staff; educators from universities and technical colleges; students in tertiary institutions; secondary and primary schools’ staff; research scientists; policy makers; employers, labour organisations and private sector. He also indicated that the project was led by FAO with the International Tropical Timber Organization (ITTO), the International Union of Forest Research Organizations (IUFRo), and ANAFE as partners. The project was funded by the Government of Germany, and ANAFE was selected to lead the Africa region assessment and consultations to assess the status of forest education. It was pointed out that the goal of the regional consultation was to validate the survey findings and gather input from regional experts working in Africa on the status and needs of formal and non-formal forest education, and the concrete actions to strengthen it.

The objectives of the regional consultations were to:

1. Validate the findings and the conclusions of the Africa regional assessment report regarding the status and needs in forest education in Africa. The themes would follow the main sections of the survey (adequacy of curricula, teaching approaches, digital readiness, etc.).
2. Prioritize gaps/needs to be addressed in the African region and develop recommendations for priority actions to strengthen forest education that will also inform the 23rd Session of AFWC to be held at the end of 2021/early 2022.
3. Review and prioritize actions and approaches for overcoming challenges and enhancing forest education in Africa.
4. Expand exposure and involvement of stakeholders on discussion of forest education to contribute to growing momentum on the topic.

After a review of the programme, there was a presentation of inspirational video messages from Dr. Eva Müller, Dr. Andrew Taber and Dr. Mika Rekola, which were followed by presentations on:

- African Forestry and Wildlife Commission work on forestry/wildlife education and profession by Dr. Soalandy Rakotondramanga.
- Project background, objectives, survey methods and results of the regional assessment on forest education by Prof. James Kung’u.

The above presentations were followed by round table discussions with key note presentations from Prof. Pantaleo Munishi, from Sokoine University of Agriculture, Tanzania; Ms Flic Blakeway, from South Africa Private Sector; Prof. James Ole Kiyiapi, a former permanent secretary in the ministry of environment and natural resources and permanent secretary ministry of education and currently a professor at University of Eldoret, Kenya; Dr Wilson Kasolo, former Principal Nyabya Forestry Technical College in Uganda; Mrs Margaret Mwaura, director of an NGO dealing with children in primary and secondary schools and former Science teacher from Kenya; and Mr Hewson Kabugi a former Director of Forest in Kenya and currently a forest consultant in Kenya. Thereafter, there were break-out sessions to discuss forest education at primary, secondary, TVET, graduate and postgraduate levels.
2. Summary of Specific Session Topics

a. Highlights from key note presentations and round table discussions

Key note presentations which are summarized in table 1, covered the following aspects:

i. Strengthening curricula to produce an effective forester to work in private sector in the 21st Century by Ms Flic Blakeway.
ii. Gaps in training and weaknesses with forest professionals joining market by Prof. Pantaleo Munishi.
iii. A comparison of the current mode of training of foresters and the past by Prof. James Ole Kiyiapi.
iv. The need to relate forestry training to employability by Mr Hewson Kabugi.
vi. Strengthening school curricula for improved forest education at primary and secondary levels in the 21st Century by Mrs Margaret Mwaura.

Table 1: Summary of key note presentations

<table>
<thead>
<tr>
<th>Presentation</th>
<th>Summary of key issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthening curricula to produce an effective forester to work in private sector in the 21st Century by Ms Flic Blakeway</td>
<td>Ms Flic Blakeway highlighted in her presentation the expectations of private sector from forest professionals in the 21st Century. She pointed out that forest education can and must be part of the solutions to many pressing needs such as reducing rates of deforestation, and supplying forest products to the ever-increasing demand. She also predicted 5% forest job growth during the 2019-2029 period, and emphasised as a way forward, the need for forest professionals to be ready to adopt in the changing environment.</td>
</tr>
<tr>
<td>Gaps in training and weaknesses with forest professionals joining market by Prof. Pantaleo Munishi</td>
<td>Prof. Pantaleo Munishi singled out inadequate research capacity among the professionals joining market, failure to embrace technology, and lack of entrepreneurial skills. He pointed out that most foresters aim to be absorbed in the formal sector, rather than creating their own businesses, and highlighted this as a challenge.</td>
</tr>
<tr>
<td>A comparison of the current mode training of foresters and the past by Prof. James Ole Kiyiapi</td>
<td>Prof. James Kiyiapi pointed out that the current forestry training is diluted, risking exit of half-baked products. Such a situation has impacted on the employability of the foresters in receding job opportunities. He also pointed out issues of dwindling funding and technology take-offer. He indicated that all these have resulted in reduced number of students enrolling for forestry courses.</td>
</tr>
<tr>
<td>The need to relate forestry training to employability by Mr Hewson Kabugi</td>
<td>Mr Hewson Kabugi pointed out that most foresters were trained to be employed in formal sector, and indicated that such opportunities have generally reduced. He emphasized the need to remain relevant in changing times. He advocated for a thorough needs assessment in order to match the forestry trainees with the available opportunities. He also advised on the need to embrace dialogues in curriculum redevelopment to facilitate the link between product and market.</td>
</tr>
<tr>
<td>Weaknesses in training foresters at technical level in the 21st Century in Africa, by Dr. Wilson Kasolo</td>
<td>Dr. Wilson Kasolo pointed out the decreasing interest in TVET forest education especially for women which has affected enrolments generally, and the existence of few forest education institutions at TVET level in most countries which tends to reduce the catchment opportunities for forestry</td>
</tr>
</tbody>
</table>
students, as limiting factors. He also highlighted limited opportunities for practicum through field work, attachments, internships and incubation/entrepreneurial opportunities as constraints to practical skills development for TVET trainees. Limited/unclear career progression/opportunities for graduates of TVET, poor linkages between education institutions, research and industry, limited resources and weakness in curriculum delivery were pointed out as limitations to forest education at TVET level. He also indicated that limited opportunities for retooling of trainers with the desired skills, and lack of quality assurance standards nationally/regionally, are also weaknesses facing forest education at technical level in Africa region.

**Strengthening school curricula for improved forest education at primary and secondary levels in the 21st Century by Mrs Margaret Mwaura**

Mrs. Mwaura highlighted the gaps in the current curricula at the primary, secondary and tertiary levels. She indicated that overall, there is lack of quality forest education in the school curriculum, poor relationships between formal and non-formal forest education, lack of gender balance, inadequate personnel and lack of resources.

During a discussion which followed the presentations, it was noted that:

i. Regarding the curricula contents and the expected products, especially in respect to future foresters, it was noted that the curricula have been doing same things for the past 15 years or longer; as such we could be looking for answers from the wrong sources. It was agreed that we have to rework on our curricula to address our needs and also mould what we want or what is relevant. It was also agreed that:

- We need to see forestry as part of a multidisciplinary field, i.e. looking at forestry in a system approach.
- We need to distinguish learning from training schools.
- There is need to look at the formal and informal forest education.

ii. Regarding employment for forestry graduates, it was pointed out that employment has been used as an incentive to train foresters. The need to change this narrative and also be truthful regarding the employability of our foresters was agreed on, noting that:

- There are job cuts happening across disciplines.
- Technology may be “eating” into the job market, and foresters have to change with time to survive.
- Governments must come up with broad policies to adjust with the new norm.
- Macro development policies need to be conducive to create opportunities in the forest sector.

iii. The following limitations were also noted during the round table discussion:

- Leadership and the lack of political-will challenges affecting forestry profession.
- The lack of proper valuation studies to enable proper understanding of the true value of forests so as to improve the sector and market profile, and investors appeal.
- The need to influence change in society through education and awareness creation on the value of forests.
b. General review of the global forest education study report

Participants reviewed the contents of the regional report regarding its accuracy in respect to the status of forest education in Africa region, and they also considered changes that needed to be made, and/or any other required supplementary information to be added.

Regarding the report’s accuracy in respect to the status of forest education in Africa region, it was noted that although the regional report gives a very good synthesis of the situation on forest education in the region, the following changes should be considered for inclusion to enhance its comprehensiveness:

- Linking forest education to actual tangible benefits for youth.
- Importance of ICT, especially in activities that will interest the youth and are beneficial in forest education and management.
- Policy issues to ensure active linkages with other professions that are allied to forestry.
- The role of traditional knowledge in enriching forest education.
- Training of lecturers in pedagogy and other skills/knowledge to enhance their delivery capacity.
3. Status of Forest Education in the African Region

a. Summary of general challenges facing forest education in Africa

Participants were tasked to identify the greatest problems facing forest education in Africa. During the plenary discussions and break-away groups which were very interactive, participants identified various challenges facing forest education in the Africa region, and categorized them as shown in Table 1 as the most urgent ones at primary, secondary, TVET, and university and college levels of training.

Table 2: Challenges facing forest education at various education levels in Africa

<table>
<thead>
<tr>
<th>Education level</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>The curricula is weak on forest education (clubs e.g., Wildlife may mention forestry)</td>
</tr>
<tr>
<td>Secondary</td>
<td>Weak curricula on forest education although forestry is mentioned in agriculture and environment</td>
</tr>
<tr>
<td>TVET</td>
<td>Lack of employment and entrepreneurial opportunities</td>
</tr>
<tr>
<td></td>
<td>Non-contextual curricula</td>
</tr>
<tr>
<td></td>
<td>Weak linkages with industry</td>
</tr>
<tr>
<td></td>
<td>Students are not well prepared for the job market</td>
</tr>
<tr>
<td></td>
<td>Lack of standards in training in some countries (no regulator)</td>
</tr>
<tr>
<td></td>
<td>TVETs ‘trivialized’ in some countries</td>
</tr>
<tr>
<td></td>
<td>Decreasing interest and enrolments in TVET forest education especially for women</td>
</tr>
<tr>
<td></td>
<td>Limited opportunities for practicum through field work, attachments, internships and incubation/entrepreneurial opportunities constrains the practical skills development for TVET trainees</td>
</tr>
<tr>
<td></td>
<td>Limited opportunities for retooling of trainers with the desired skills and knowledge</td>
</tr>
<tr>
<td></td>
<td>Limited resources and weakness in curriculum delivery</td>
</tr>
<tr>
<td></td>
<td>Lack of career progression</td>
</tr>
<tr>
<td>University and Colleges:</td>
<td>Lack of adequate funding for forest training/institutions</td>
</tr>
<tr>
<td>(Bachelor’s and Post graduate)</td>
<td>Lack of employment and entrepreneurial opportunities</td>
</tr>
<tr>
<td></td>
<td>Weak linkages with industry</td>
</tr>
<tr>
<td></td>
<td>ICT</td>
</tr>
<tr>
<td></td>
<td>Lack of leadership training</td>
</tr>
<tr>
<td></td>
<td>Student and lecturer visits to increase exposure and bench-mark</td>
</tr>
<tr>
<td></td>
<td>Students not well prepared for the job market</td>
</tr>
<tr>
<td></td>
<td>Emerging issues not well captured</td>
</tr>
<tr>
<td></td>
<td>Inadequate lecturers’ skills in pedagogy to deliver well</td>
</tr>
<tr>
<td></td>
<td>Lecturers often not specialized in ‘emerging issues’ in forestry</td>
</tr>
<tr>
<td></td>
<td>Inability to react quickly to emerging issues due to restrictive policy (e.g. curricula in some countries can only be changed every 4 years)</td>
</tr>
</tbody>
</table>

i. Challenges facing forest education at primary and secondary school levels in Africa

The following were identified as challenges facing forest education at primary and secondary schools’ education levels:

- There is the need to revise and improve the teaching and learning methodology and make a distinction in the teaching and outdoor activities.
• Students at the secondary school level, where majority make choices on particular fields to pursue upon joining the colleges and/or universities are unaware of the opportunities in forestry professional.
• Forest education ought to be marketed and awareness created from primary to the secondary school level to increase the awareness and interest of the students.
• Forest education is not included as an individual subject in most of the primary and secondary school curricula therefore, it is rarely taught in the schools other than a few aspects of it in other subjects.

ii. Challenges facing forest education at TVET level in Africa

The following were identified by participants as challenges facing forest education at TVET level in Africa:

i. Lack of awareness of the importance of forestry, and the consequential limited attention given to forestry sector and forest education, in preference to agriculture regarding food security and other livelihoods initiatives.

ii. Training which is more theoretical, with inadequate practical opportunities.

iii. Declining interest in forest education as a priority study area by students at technical levels.

iv. Limited information and awareness about existing job and professional growth opportunities in forestry.

v. Lack of contextual teaching materials.

vi. Declining students’ enrolments in tertiary institutions.

vii. Integrating forest education in primary and secondary school education programmes.

viii. Integrating emerging issues in forest education therefore losing focus.

iii. Challenges facing forest education at undergraduate level in Africa

Regarding forest education at undergraduate level, the following were identified as the main challenges in Africa:

• Lack of interest from potential students - fear of unemployment after graduation.
• Lack of job opportunities.
• The social construct of Africa (family context, gender).
• Forestry is not regarded as a profession (anybody can plant trees). Related to payment which is not commensurate with the degree (e.g. in Ghana).
• Limited funding for forestry activities and education from governments.
• Issues of qualification of educators:
  o Lack of qualified teachers and lack of continuous learning for teachers (school and university levels). For example, technical subjects in forestry require biology, maths, science teachers (case of South Africa).
  o Lack of field experiences and adequate practical exposure.
• Limited support for technology and digitalization.
• Corruption (e.g. illegal sale of forest produce is a disincentive to some).
• Limitations in accessing resources (training and learning materials) for students.
iv. Challenges facing forest education at postgraduate level

The following were identified as the main challenges facing forest education at post-graduate level in Africa:

1. Inadequate link and collaboration between training, research, policy and industry:
   a. Curriculum development does not reflect socioeconomic, policy and linkage to industry/private sector.
   b. Inadequate student attachment at research and industry sectors.
   c. Who drives research and innovations?
2. Inadequate awareness/profiling of forestry as an attractive competitive profession:
   a. Borrow from best practices from developed countries.
   b. The need to rebrand the profession.
3. Inadequate linkage between training and job market:
   a. Review curriculum to address market needs.
   b. Carry out continuous market needs assessment.
   c. Create employable and self-employed professions.
   d. Produce graduands who have entrepreneurial skills.
4. Inadequate diversification of the sector including covering emerging issues:
   a. Expand scope and range in forestry to include environmental and society needs.
   b. Promote incentive-based schemes such as Payments for Ecosystem Services including carbon trading and markets.
   c. Embrace green and blue economy in research.
   d. More research in urban forestry.
   e. Embrace value chain approach in forest products and services.
   f. Diversify topics, breadth and depth in research.
5. Inadequate and ineffective policy, and legal frameworks to support forestry research:
   a. Proactive in review of policy and legislations related to forestry research and education.
   b. Development of instruments/tools to implement policy and legislations.
   c. Create linkage between national, regional and international policies in forestry including international obligations and agreements.
   d. Work with technocrat to influence policy.
   e. Involve high level policy makers in forestry research and education.
   f. Lobby for enactment of policy and legal framework that can open up forest space.
   g. Create a think-tank for forestry research/training experts.
6. Producing research products that are not adopted by users as they do not have costing for the innovation:
   a. Compute costs for producing innovations in research product.
   b. Carry cost benefit analysis and potential for upscaling.
   c. Conduct needs assessment of the products.
7. Inadequate funding levels of forest research:
   a. Funding levels for studies – scholarships.
   b. Undervaluation of forest leading to low contribution to national accounting.
   c. Collaboration with regional and international institutions and development partners.
d. Setting green funds to support forestry research.

8. Forestry not taken as competitive enterprise that can be gainful:
   a. Promote takeoff of commercial forestry enterprise.
   b. Open up markets for forest products and services.
   c. Certification of forest nurseries and products to create job opportunity.
   d. Improve forest industry value chain enterprises.
   e. Promote forest enterprises among the youth.
   f. Provide incubation supports.
4. Summary of planned solutions, interventions and associated actors

a. General solutions/interventions proposed

Workshop participants reviewed possible interventions/solutions to the identified challenges and agreed on those indicated in table 2.

Table 3: Possible to interventions to the identified challenges to forest education in Africa

<table>
<thead>
<tr>
<th>Action to be taken</th>
<th>Responsible organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Active/purposeful support/funding for forest education</td>
<td>• Governments and development partners</td>
</tr>
<tr>
<td>• Providing necessary equipment and infrastructure to forestry training institutions including ICT support</td>
<td>• Governments and development partners</td>
</tr>
<tr>
<td>• Development of affirmative action programmes for forest education, like fellowships, incubations especially in support for women</td>
<td>• Governments and development partners</td>
</tr>
<tr>
<td>• Curriculum review to include emerging issues</td>
<td>• Governments/NGOs/universities/TVET</td>
</tr>
<tr>
<td>• Development of relevant teaching materials</td>
<td>• Teaching institutions, governments and development partners</td>
</tr>
<tr>
<td>• Pedagogy training for lecturers</td>
<td>• Universities/TVETs and development partners</td>
</tr>
<tr>
<td>• Active partnerships/linkages and collaborations</td>
<td>• Governments/NGOs/universities/TVET/industry</td>
</tr>
<tr>
<td>• Establishment of enabling policies to allow quick review of curricula to take care of emerging issues</td>
<td>• Governments/universities/TVET</td>
</tr>
</tbody>
</table>

i. Proposed interventions to challenges facing forest education in Africa

Cross-cutting interventions summarized in table 3, were proposed for the identified challenges facing forest education at the various levels of learning in the African region.

Table 4: Identified interventions to challenges facing forest education in Africa

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation of awareness about forest education and the forestry sector generally.</td>
<td>Forest institutions and government</td>
</tr>
<tr>
<td>Rebranding of forest profession.</td>
<td>Forest institutions, professional bodies, ANAFE</td>
</tr>
<tr>
<td>Review curricula in participation with research institutions and other stakeholders.</td>
<td>Research institutions, professional bodies, Forest training institutions including universities, ANAFE</td>
</tr>
<tr>
<td>Create platforms for linkages between universities, research, industry, policy and private sector.</td>
<td>Universities, research institutions, professional bodies, ANAFE with FAO support</td>
</tr>
<tr>
<td>Develop continuous professional development training.</td>
<td>Professional bodies</td>
</tr>
<tr>
<td>Create cutting edge curriculum/programs that can address market needs.</td>
<td>Universities, colleges, ANAFE, federation of employers, AFF</td>
</tr>
<tr>
<td>Identification of market needs.</td>
<td>Universities, research institutions</td>
</tr>
<tr>
<td>Activity</td>
<td>Responsible Parties</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Produce graduates with entrepreneurial skills.</td>
<td>Universities, AFF</td>
</tr>
<tr>
<td>Include diversifications and multidisciplinary research in forestry courses.</td>
<td>Forest training institutions in consultation with the stakeholders with support from ANAFE and FAO</td>
</tr>
<tr>
<td>Develop incentives-based forest education schemes.</td>
<td>Research institutions, government, development partners</td>
</tr>
<tr>
<td>Cover additional topics in forestry.</td>
<td>Universities, research institutions, ANAFE, AFF, FAO</td>
</tr>
<tr>
<td>Continuous contribution to policy and legal frameworks.</td>
<td>Forest training institutions in consultation with the stakeholders with support from ANAFE and FAO, governments</td>
</tr>
<tr>
<td>Development of tools to implement policy and legislation.</td>
<td>Research institutions and government</td>
</tr>
<tr>
<td>Develop/strengthen linkages between policies – national and international.</td>
<td>ANAFE, AFF, FAO, research institutions</td>
</tr>
<tr>
<td>Influence policy.</td>
<td>Civil society, ANAFE, AFF, FAO</td>
</tr>
<tr>
<td>Create think-tank on forestry.</td>
<td>AFF, ANAFE</td>
</tr>
<tr>
<td>Incorporate costing in research innovations.</td>
<td>Forest training institutions, research managers, private sector</td>
</tr>
<tr>
<td>Undertake cost benefit analysis for forestry activities.</td>
<td>Research managers, scientists</td>
</tr>
<tr>
<td>Develop financing mechanisms for forest research and innovations.</td>
<td>National governments, AFF, ANAREF, FAO, Africa Forest Commission, national treasury</td>
</tr>
<tr>
<td>Valuation of forest and the contribution to national accounting.</td>
<td>Research institutions, universities, governments, development partners, FAO</td>
</tr>
<tr>
<td>Collaboration in research.</td>
<td>ANARE, universities, governments</td>
</tr>
<tr>
<td>Package forestry as a competitive land use option that contributes to national economy.</td>
<td>Private sector, national governments and NGOs</td>
</tr>
<tr>
<td>Open up markets for forestry.</td>
<td>Private sector, government, development partners</td>
</tr>
<tr>
<td>Forest certification and value chain.</td>
<td>Professional bodies, research, FAO, development partners</td>
</tr>
<tr>
<td>Promote forestry among youth.</td>
<td>Youth departments, AFF, professional bodies</td>
</tr>
<tr>
<td>Develop contextual teaching materials.</td>
<td>Universities, colleges and schools and development partners</td>
</tr>
<tr>
<td>Support internships, attachments and incubations.</td>
<td>Universities, colleges, industry and development partners</td>
</tr>
<tr>
<td>Support staff and students learning and training exchanges.</td>
<td>Universities, colleges and development partners</td>
</tr>
</tbody>
</table>
5. Relevance of forestry to current and future needs of humanity

a. Relevance of forest education to the challenges and concerns of the 21st century

Participants reviewed the relevance of forestry training programmes, which are offered at the different levels of learning in the African region, with respect to the challenges and concerns of the 21st century, and noted the following:

- There is need to embrace key technologies and respond to disruptive technologies.
- There is need to be dynamic and agile with respect to emerging issues.
- The challenge of keeping pace with latest technologies and needs, which is exacerbated by weak policies in place, and lack of synergy between tertiary education, science and innovation in forestry.
- Lack of adequate infrastructure (hard and soft).
- The need to develop synergies for example between forestry and computer science (example, App development, project development and implementation) noting that forestry students learn from their peers and can apply such knowledge in real life situations.
- The need to link theories with practices.
- The need to link with climate change and other emerging issues.

Participants further noted that current forest education at TVET, undergraduate and postgraduate levels does not adequately capture the challenges and concerns of the 21st century, because:

- Most curricula are obsolete.
- Lecturers and instructors need to be trained to update their skills/knowledge.
- Training is largely lacking in practical content, especially at TVET level, which is expected to be more practical.
- Resourcing of forest education is generally low, to enable suitable training implementation.
- There is limited application of new and current technologies (e.g. GIS and remote sensing) as opposed to use of traditional tools such as chain links in forest inventory surveys in forest education.
- There is a need to adopt participatory development of forest education programmes (curricula reviews and development) to enhance stakeholder ownership/inputs, and ensure the relevance of forestry education programmes.

b. Future of forest education institutions in ten years’ time ahead

Given the current trajectory of needs and services from the forestry sector and other sectors related emerging issues, and the related consequential effects on forestry education and forestry institutions, the following will be imperative regarding forest education in the next 10 years:

- The need to integrate climate change and circular economy into the curricula.
- Integration of latest technology, artificial intelligence and innovation integration into all aspects of the forestry curriculum.
• Improved internet connectivity will be crucial for facilitating online education in Africa.
• There will be a model of blended learning, relying on technology with a focus on issues of equity.
• Foundation forestry learning will be important – grounding in basic forest science.
• Online learning with practical aspects to be incorporated - practical exercises, fieldwork etc.

It was also further noted that in the upcoming decade:

• Forest education in Africa will have to be diversified to address cross-cutting issues in forestry (such as climate change adaptation and mitigation, biodiversity mainstreaming, urban forestry, water conservation, pollution, deforestation control, agroforestry, etc.), otherwise it will become obsolete.
• Forest education will need to sharpen the business/entrepreneurial elements in forestry education training to enable graduates to view forestry for its entrepreneurial scope and as a source of livelihood and explore its economic potential/dimensions.
• Forest education shall be packaged so as to spur increase in forestry investments and entrepreneurship.
• Emphasis needs to be placed put on sustainable forest management, and climate conservation/management aspects.

c. Rebranding of forest education in Africa

Participants discussed the current status and profile of forest education, and reviewed the current and future expectations on forest education from sector stakeholders. It was agreed that there is need to rebrand forest education and also expand its scope to better incorporate stakeholders’ expectations regarding forest management, and the broader environmental management/conservation goals. It was further pointed out that:

i. Current forest management needs to be more holistic, embracing many emerging natural resources management and conservation concepts, like ecosystem management, green economy, food security, poverty eradication etc.

ii. For many years, forest education has been focused on timber production techniques. There is need to rebrand and for forestry to be identified as a sector that can address and contribute to action on climate change, biodiversity conservation, climate smart agriculture, food security etc.

iii. We need to improve the existing communication strategy to enhance forest education’s appeal and profile for improved students’ enrolments.

iv. We need to rebrand forest education to better inform/raise awareness on the benefits of professional forest management through well trained professional staff.

v. We need to increase awareness about the role of forest resources in other sectors, like science, medicine, agriculture, engineering etc., and the consequent need for quality forest education to professionally manage forest resources.

vi. There is a need to profile benefits and services that forestry offers (as there is still a lack of knowledge and undervaluation of forests), and present a new outlook and new image of forests and forestry profession, and consequently, the need for quality human resource training for the sector.
vii. Improve the perception of communities around the forests regarding professional forest management and the benefits, and facilitate better custodianship and management of forests.

viii. There is need to rebrand forest education in terms of programmes offered, strengthening the research content, increasing content and focus regarding the needs of the local people, and enhancing content on climate change adaptation and mitigation.

ix. Previously forestry was more of a government affair focusing on the economic aspects and the conservation aspects of wildlife and water resources. However, there is need to rebrand forest education so that it addresses the emerging challenges of climate change, livelihood sources and food security.

x. Rebranding forest education should allow for participation in forest resources management and utilization of more stakeholders other than foresters and forest guards, like the involvement of the community and other consumers of forest products.

xi. Rebranding of forest education should facilitate the involvement of community in the aspects of forest governance, and skill students with the ability to facilitate community engagement in forest governance.

xii. Rebranding forest education should highlight the benefits of forests to show case not just the environmental benefits but also economic and social benefits which help to improve communities’ livelihoods. (Have a balance on the conservation and utilization of forestry services. For instance, more importance should be given on increasing awareness on the psycho-social benefits (mental and physical health benefits) of forests.

xiii. Through rebranding, the scope of forest education should be widened to teach in depth knowledge on ecosystem services from forests so as to motivate learners to conserve the forests and other environmental resources.

The following points were also highlighted to be considered during rebranding of forest education:

- Issues of sustainability (economic, social and environmental) in forest education.
- Opportunity to rebrand the entire forest sector.
- Reinvigoration of peoples’ perception and appreciation of everything related to trees.
- Change of perception/address the corruption in the forest sector.
- Emphasise the linkages between water, energy, and wildlife.
- Highlight the role of traditional medicines and traditional knowledge in forestry.
- Highlight the positive contribution of forestry to national GDP.
- Rebranding forestry as a profession that takes care of the earth (climate change, lungs of the Earth).

**d. Integrating forest education and knowledge in the broader ‘Green’ programmes**

Participants took note of the current general drive towards greener economies and indicated the need for the forestry sector to be part of this development. It was noted that this will however, require skilled human resource. It was agreed that there is a need to integrate forest education and knowledge into the broader ‘Green’ programmes such as climate change and environmental studies, and elements of ‘Green’ programmes in forest education programmes through:
Multi-sectoral approaches in the development of learning curricula to allow participation and collaboration from individuals in different sectors. This will ensure that forest education is more integrated in order to address emerging challenges like climate change and other environmental challenges. The importance of multi-sectoral approach brings on board the views of different sectors given that ‘Green’ programmes are broad issues entailing sustainable management of resource, equity and community participation.

Forest education needs to be made holistic to include entrepreneurial training, and including forest education in all taught subjects in schools (ensuring that there is interaction between forest education and other taught subjects).

Incorporation of capacity development on forestry related aspects in ‘Green’ programmes. Capacity building allows for better integration of forest education and knowledge.

Regular curricula reviews.

Forming linkages with institutions dealing with ‘Green’ programmes.

Students’ attachments and internships with ‘Green’ institutions.

Improving linkages/collaboration/partnerships with other agencies/organizations involved in ‘Green’ programmes, and also engaging/involving them during programmes’ development and implementation.

Developing tailor made courses/programmes for various stakeholders like local people, covering emerging issues on ‘Green’ programmes like agroforestry technologies, climate change, environmental conservation issues, soil conservation etc.

Integrating forest education in real estate/building/construction especially on green infrastructure.

Packaging short courses for non-forestry professionals (forestry information for reference/consultation as they practice their ‘Green’ programmes).

e. Required changes for improving forest education in Africa

Changes needed to improve forest education in the African region were reviewed by participants, and the following were identified as most important:

- Contextual forest education needs should be included in the curricula, unlike the current situation where they are imagined or included only to a limited extent.
- Forest industries should be involved in the learning process in order to equip the students with the practical knowledge they need and raise their interests in forest education.
- In addition to the technical and social aspects taught in forest education, the teaching curricula should incorporate the aspect of entrepreneurship. Entrepreneurship skills equip the students with the knowledge of how to solve problems in the forestry sector thus creating jobs rather than relying on formal employment offered by the government and other non-governmental institutions.
- National governments should have better policies for forest education; policies that provide opportunities for attachments, internships and incubation where students can acquire relevant practical skills. This is bound to make forest education more attractive to the youth (this is more relevant for the tertiary levels).
- There should be open training days during which forest professionals are invited to speak to the children about forestry as a potential profession to consider. This is intended to enlighten the students on the prospects of forestry profession and to increase their interest in pursuing forestry
profession. Some of the topics addressed in the talks can be in forest management, forest products and individual rights in accessing forest products.

- Ensure that classroom learning is integrated with field visits in the forest areas to create awareness.
- Integration of forest education in the social and agriculture components of the curricula in the primary and secondary levels to sensitize students on the importance of forests. For example, establishment of tree nurseries and woodlots in schools and student involvement in planting trees within the school premises so that they can learn first-hand the importance of trees.
- Governments should actively support/fund forest education.
- Fostering of political good will towards forest education and forestry generally.
- Raise the profile of forest education.
- Have forestry professionals acting in high offices to act as examples of the profession.
- Adoption of more participatory curriculum/programmes development/implementation approaches, to be able to develop/implement relevant and more responsive curricula/programmes to the needs of the forestry sector.
- Enhancement of curricula practical content, and delivery capacities of training institutions.
- Improve the business and entrepreneurial content of forestry training programmes.
- Improve and formalise linkages between forestry industry, research and education.

f. Required actions to improve forest education in Africa

Given the identified needs, challenges and limitations to forest education in Africa, participants discussed and agreed on actions to be taken (Table 4), and also suggested the responsible organizations.

Table 5: Proposed Actions and Responsible Organizations

<table>
<thead>
<tr>
<th>Action to be taken</th>
<th>Responsible organisation</th>
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</thead>
<tbody>
<tr>
<td>Awareness Creation.</td>
<td>• Teachers in collaboration with the local forestry department officers.</td>
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<tr>
<td></td>
<td>• National/sub-national/regional level experts can create short videos which would feature day-to-day involvement in working in the forest sector and the importance of such involvement (interactive videos to train the students).</td>
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<tr>
<td></td>
<td>• International NGOs dealing with environmental projects can include the aspect of awareness creation in schools.</td>
</tr>
<tr>
<td>Establishment of tree nurseries in schools and woodlots. The schools can obtain tree seeds and seedlings from the national or local forestry department.</td>
<td>• International NGOs.</td>
</tr>
<tr>
<td></td>
<td>• National/sub-national/forestry department.</td>
</tr>
<tr>
<td>Involve students in manageable affordable projects with supervisory guidance – this is important in teaching the students on the holistic value chain of forests and forest products. For example, the students can be guided on how to make simple wooden tools from the timber.</td>
<td>• Actively involve the school teachers.</td>
</tr>
<tr>
<td></td>
<td>• Established school demo plots supervised by teachers.</td>
</tr>
</tbody>
</table>
Develop entrepreneurial skills.

Guide students in practical activities of collecting forest products such as wattle, gum and resins, and fruits. || Ministry of Education, Environment, Natural Resources and Agriculture (National forestry departments).  
- School Environmental clubs, 4K Clubs,  
- UNEP, UNESCO, Green Belt Movement, National Geographic, NGOs

Retooling the teachers. || Universities, Colleges and ANAFE  
- Short courses offered by national forestry departments, higher level education institutions and/or private sectors.  
- Training and awareness workshops.

Include forest education in primary and secondary curriculum. There is need to review the curricula. || Ministry of Education, NGOs, UNESCO.

Demonstrations on the value of forests and trees. || Governments and NGOs

Governments to actively support/fund forest education. || Governments.

Curriculum review to include emerging issues. || Governments/NGOs/Universities/TVET, and ANAFE.

Contextual learning material. || Governments, Universities, Colleges and ANAFE.

Active partnerships/linkages and collaborations. || Governments/NGOs/Universities/TVET/Industry.

Rebranding of forest education for better appeal. || FAO, ANAFE and Universities and Technical Colleges.

Enhancing the delivery capacities of forest education institutions. || FAO, ANAFE, Development Partners, National Governments and Education institutions.

Repackaging forest education programmes to be holistic and responsive to sector/stakeholders needs. || FAO, ANAFE, ITTO, IUFRO.  
- Education institutions, Private Sector, and National Governments.

Development of enabling frameworks, networks, partnerships and policies for the way forward. || ANAFE, FAO, Private Sector, National Governments and Education institutions.

g. Expected long term impacts of forest education

Participants reviewed the expected long-term impacts of forest education in Africa, and agreed on the following:

- Production of a bigger skilled workforce for joining the forestry sector.
- Cultivating awareness among children from an early age, on the importance of forests and forests ecosystems so that no matter which sector they end up in, they will be attuned to the impacts of forests and forests ecosystems to these sectors.
- Because of the extensive interaction between children and their parents especially at the primary and secondary level, there is a probability that they will influence their parents towards taking positive measures to conserve forestry ecosystems.
• Capacity building for monitoring and evaluation to establish short, medium and long-term impacts of forest education training and exposure. The results from the monitoring and evaluation surveys can be used to improve the quality and focus in targeting the training.

• The students at the primary and secondary level shall be able to acquire a positive attitude towards the environment when they are involved in outdoor activities geared towards environmental conservation.

• Good and well managed environment.

• Reduced negative impact of climate change.

• Better management of natural resources.

• Improved livelihoods especially in rural areas.

• Quality and relevant forest education.

• Improved management and conservation of forestry resources.

• Improved business and entrepreneurial appeal of forestry.

• Improved appeal and enrolments for forest education.

• Improved forest sector profile and support for forest education.
6. Initiatives and partnerships for improving Forest Education in Africa

a. Key initiatives and actors working to improve forest education in Africa

Current and previous initiatives and actors involved in improving forest education in the African region were reviewed, and the following were identified as the key ones:

1. ANAFE
2. ICRAF
3. AFF
4. FAO
5. AFWC
6. Green Belt Movement
7. Children’s Environmental Rescue (CER)
8. VI Agroforestry
9. I Choose a Tree initiative in Africa
10. Green Habitat (works with secondary schools)
11. Nile Basin Initiative
12. Studies e.g. United Nations Forum on Forests (UNFF)
13. Universities (List with ANAFE)
14. Technical Colleges (List with ANAFE)

b. The role of continuing education in supplementing and complementing formal education

The role of continuing education in supplementing and complementing formal forest education was discussed by participants, and it was noted that:

- It enables the acquisition of better/higher qualifications by forestry graduates at different levels.
- It facilitates the provision of better qualified professionals to manage forests and natural resources.
- It can provide opportunity for informal skills development and knowledge dissemination to various interest groups, especially at local community level.
- It provides an avenue for skills and knowledge enhancement outside formal education environments.
- It facilitates provision of targeted skills to identified stakeholders outside formal education delivery programmes.

The role of informal education and its relation to formal forest education in Africa

Informal education was reviewed by participants and its role in forest education, and as a means to valuing and embracing traditional and indigenous knowledge and how it relates to formal forest education in Africa. It was observed that informal education enables the storage, acquisition and dissemination of knowledge...
and skills from one person/group to another in non-formal learning and training environments. The knowledge and skills can be indigenous and/or foreign in nature, and can address traditional/indigenous knowledge or otherwise. It also facilitates the integration and blending of indigenous knowledge into management sciences, and it enables the profiling and repository of indigenous knowledge. It was also noted that:

- Integration of indigenous knowledge in forest education facilitates the integration of historical lessons on human interactions with natural environment, and application of lessons for the current situations in conserving and sustainably managing the environment.
- Informal education and indigenous knowledge offer awareness to communities regarding relevant tree species to grow for medicinal, economic values as well as improving soil health.
- Informal education influences individuals to value trees and forests at large.
- Informal education through indigenous knowledge on benefits of certain trees in various societies, has led to the scientific research of those tree species in order to detail the benefits of the trees and thereby encouraging growing of those trees on a wider scale.
- Indigenous knowledge on the sacred nature of certain trees as well as the benefits of those trees, has informed the conservation of forests to the extent which communities believe that certain trees should not be cut down. This informs research which relates to the formal forest related education.
- Traditional knowledge can be integrated into science especially regarding food, medicines.
- Traditional knowledge on the fruits used as ‘out of season’ feed can assist climate change resilience.

**d. The role of women and youth in forest education in Africa**

The role of women and the youth was noted as very important in enhancing forest education for sustainable forest resources management, and the general forestry sector performance. The following roles were highlighted as important:

- Participation in defining training needs.
- Participation in the development and implementation of training programmes.
- Equipping women with forestry management skills, because women in Africa heavily depend on forest products such as firewood and fiber. If they were given skills through forest education programmes, they would be able to plant trees on their own farms from which they collect the firewood, and would also use the established woodlot to train their children and others in their communities in forest management and also create awareness on the importance of conserving forests.
- Training the youth in forestry because the youth are presently turning to youth enterprises using forests and forest products. They are involved in making items like furniture, oils, mats, and turning forests into excursion/tourism centers for nature walks, zip lining and wildlife/bird watching. If equipped with the appropriate skills through forest education, these young people can earn a living by being engaged in various forest conservation/income generating forestry related activities like tour guides to teach local and international tourists about the benefits of conserving the forest generally, as well as different useful species found within the forests.
- Youth can participate as trainers, because the youth are well endowed to communicate digitally, hence they can offer training workshops on forest education.
• Mentoring of women and the youth can enhance the appreciation of forestry by societies.
• Role modeling by the youth in forest education will improve the profile of forest education and forestry as a sector amongst the youth, and increase enrolments.
• Profiling of improved action-based forestry (e.g. tree planting and care).

e. Identified priority areas for improving forest education

The following were identified as priority action areas for improving forest education in Africa:

i. Creation of job opportunities.
ii. Developing trainees who can create jobs – entrepreneurs.
iii. Policy reviews to enhance support and implementation of forest education and the forest sector generally. The reviews can be initiated by ANAFE and other agencies with support of governments, FAO and NGO’s.
iv. Creation of a “think tank” to champion rebranding, resourcing and other support needs for improving forest education.
v. Integration of emerging concepts and issues such as Payment for Ecosystem Services (PES), climate change in forest education.
vi. Review the packaging of forest education products in response to stakeholders’ needs (review curricula and delivery capacities/resources).
vii. Enhance delivery capacity of training institutions through teaching materials development support, teaching equipment and demonstration facilities.
viii. Development of Innovative financing mechanisms for forest education and the general forest sector.
ix. Rebranding forestry.
x. Development of strategies for transforming forestry students into innovators, skilled managers and entrepreneurs.
xi. Improving the profile of forestry sector and forest education for a better appeal.
xii. Training of trainers.
xiii. Improving practical training content through provision of internships, attachments and incubation opportunities.
xiv. Affirmative action support to increase forestry students’ enrolments, especially the female students.

f. Identified regional needs

In quest for improving forest education in Africa, the following were identified as cross cutting regional needs:

i. Diversification and integration of emerging issues like climate change, biodiversity mainstreaming, urban forestry, water conservation etc. in forest education programmes.
ii. Enhancement of the business, livelihoods and sustainable forest management elements in forest education programmes.
iii. Rebranding forest education.
iv. Valuation of forestry for better profiling and appeal to development partners.

v. Strengthening research on the support of livelihoods by the forestry sector.

vi. Improvement of networking and collaboration between education, research and industry.

vii. Bridging the gap between tertiary institutions that offer forest education.

viii. Undertaking forestry jobs characterization to establish job availability and training requirements.

ix. Categorization of drivers of forest education for better management planning.

g. Identified gaps in forest education, training and research in Africa

Participants identified the following as the main gaps in forest education, training and research in Africa:

i. Most graduates from forest education programmes lack work-place readiness and employability potential.

ii. Most graduates from forest education programmes are deficient in digital readiness.

iii. Reviewing and strengthening curricula to produce effective and relevant graduates.

iv. Integration/focus on top emerging/disruptive technologies in forest education training programmes.

v. Refocusing forest education programmes in tertiary institutions, which have largely been tailored to produce labour for government agencies.

vi. Enhancing the role of and opportunities for informal forest education.

vii. Limited opportunities for practicum through field work, attachments, internships and incubation/entrepreneurial opportunities.

viii. Limited opportunities for retooling of trainers with the desired/current knowledge and skills.

ix. Limited/unclear career progression/development opportunities for graduates from TVETs.

x. Lack of contextual training materials.

xi. Opportunities for training of trainers in emerging issues/technologies.

h. Other suggestions for improving forest education in Africa

Participants also considered other useful/related suggestions which can positively impact on forest education, and identified the following:

a. Support the implementation of young Africa forest summit recommendations.

b. Studies in masters and PhD should adapt to local context to address practical issues.

c. There is need to package forest education for forest professionals who can work together with other related disciplines like natural resource management and environmental studies.

d. The need to define activities that constitute forestry – how far do we extend the scope to cover forestry (- do we go up to value chains, furniture?).

e. It was noted that earlier forest programs were well developed due to support from development partners and international institutions. The current programs do not receive such support, resulting to graduates who are not prepared for the industry due to low technical exposure.

f. The need to understand broad dichotomy of forestry sector and education. There is need to understand forest dynamics when reviewing forest curricula.
g. Weak forest profession due to failure in generating practical knowledge for informed decision making.

h. There has been a weakness in understanding the interface between people and ecosystems.

i. The need to strengthen forestry training programs by introducing practical application knowledge.

j. Current problems in profession arise from the fact that the officers who are current managers did not have good foundation in forestry. This came about after the development partners and projects previously running in universities were concluded forcing universities to continue running with low government funding.

k. Review of curricula in universities and colleges takes a long time due to bureaucracy and rigidity in the review process.

l. Forest sector has not attracted enough interest due to its perceived low contribution to national accounting.

m. Universities and colleges should produce graduates who are responsive to changing labor markets and who are equipped with not only forestry skills but other soft skills.

n. Community involvement and contribution during curricula development is key – it is important to have feedback mechanism to understand effectiveness of training in the labor market.

o. Universities and colleges need to embrace ICT in training and follow-up of trainees.

i. Main recommendations and suggestions

a. Creation of champions of forest education at the various planned levels.

b. Development/revival, and/or strengthening regional collaboration, through ANAFE, AFF and other development partners.

c. Improvement of collaboration, networking and feedback mechanisms between industry, research and education.

d. Integration of forest education in primary and secondary schools’ curricula.

e. Packaging of forest education to produce forestry sector workers largely for the general private sector, besides government.

f. Improving linkages and collaboration between policy, education and research.

g. Improving on the valuation of forestry goods and services to reflect the true value of the sector, and the consequent potential appeal.

h. We all need to start impacting on local communities and all stakeholders generally, in one way or another for better appeal and profile of forest education and the sector in general.

i. Improving opportunities for practicum through field work, attachments, internships and incubation/entrepreneurial opportunities.

j. Providing opportunities for retooling of trainers with the desired/current knowledge and skills.

k. Defining career progression/development opportunities for TVET graduates.

l. Development of contextual training materials.

m. Development of affirmative support programmes for forest education at universities and colleges especially for female students.
7. Summary of the key challenges and needs for forest education in Africa

a. Key challenges for forest education in Africa

i. Lack of awareness of the importance of forestry, and the consequential limited attention given to it in preference to agriculture regarding food security initiatives.
ii. Widespread theoretical training, with inadequate practical opportunities.
iii. Declining interest in forest education as a priority study area by students at technical and undergraduate levels.
iv. Limited information about existing jobs and professional growth opportunities in forestry sector.
v. Lack of contextual teaching materials.
vi. Curricula review support – resources and policies.
vii. Declining students’ enrolments in tertiary institutions.
viii. Integrating forest education in primary and secondary school education programmes.
ix. Integrating emerging issues in forest education without losing focus.
x. Limited opportunities for staff retooling.
xi. Development and implementation of relevant forest education programmes across all levels of education in the African region.

b. Key needs for forest education in Africa

i. Diversification and integration of emerging issues like climate change, Biodiversity mainstreaming, urban forestry, water conservation etc. in forest education programmes.
ii. Enhancing the business, livelihoods and sustainable forest management elements in forestry education programmes.
iii. Rebranding forest education.
iv. Valuation of forestry for better profiling and appeal to development partners.
v. Strengthening research on livelihoods opportunities in forestry.
vi. Improving networking and collaboration between education, research and industry.
vii. Bridging the gap between tertiary institutions that offer forest education.
viii. Undertaking forestry jobs characterization to establish job availability and training requirements.
ix. Categorization of drivers for forest education better management planning.
x. Development of contextual teaching materials.
xi. Teaching staff retooling.
xii. Internships, attachments, fellowships and incubation opportunities for improved forest education.
c. Summary of solutions and interventions proposed

i. We need to create champions of forest education at the various planned levels.

ii. Regional collaboration needs to be strongly revived and supported, through ANAFE, AFF and other development partners.

iii. Improving collaboration, networking and feedback mechanisms between industry, research and education.

iv. Integrating forest education in primary and secondary schools’ curricula.

v. Repackaging forest education to produce labour for the forestry private sector in generally, besides government.

vi. Improving linkages and collaboration between policy, education and research.

vii. Improving on the valuation of forestry goods and services to reflect the true of the sector, and the consequent potential appeal.

viii. We all need to start impacting on local communities and all stakeholders generally, in one way or another for better appeal and profile of forest education and the sector generally.

ix. Developing programmes/opportunities for retooling of trainers with the desired/current knowledge and skills.

x. Defining and harmonizing career progression/development opportunities for graduates of TVET.

xi. Curricula reviews.

xii. Training of Trainers.

xiii. Development of contextual training materials.

xiv. Development of affirmative support programmes for forest education at universities and colleges especially for women students.

xv. Provide support for internships, attachments, and incubation opportunities for improved practical forest education.
# ANNEX: List of Participants

List of Participants for the Regional Expert Consultation Workshop on Forest Education in Anglophone Africa held on February 2, 2021

<table>
<thead>
<tr>
<th>Sr No.</th>
<th>Name of Participants</th>
<th>Affiliation</th>
<th>Name of the Organization</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Mr. Stephen B. Mattia</td>
<td>Senior Lecturer, and Head of Department (Department of Forestry)</td>
<td>Njala University (Q2)</td>
<td>Sierra Leone</td>
</tr>
<tr>
<td>2.</td>
<td>Dr. Oladoye A. Olusegun</td>
<td>Senior Lecturer and Coordinator Part Time Degree Programme</td>
<td>Federal University of Agriculture, Abeokuta (Q2)</td>
<td>Nigeria</td>
</tr>
<tr>
<td>3.</td>
<td>Mr. Benson Nwajiobi</td>
<td>Lecturer</td>
<td>Michael Okpara University of Agriculture, Umudike (Q2)</td>
<td>Nigeria</td>
</tr>
<tr>
<td>4.</td>
<td>Dr. Moses Fayiah</td>
<td>Lecturer and Independent Researcher</td>
<td>Njala University (Q2)</td>
<td>Sierra Leone</td>
</tr>
<tr>
<td>5.</td>
<td>Mr. Ibrahim Inusa</td>
<td>Founder</td>
<td>Nature conservation advocates for climate initiative (NCACI) (Q1)</td>
<td>Sierra Leone</td>
</tr>
<tr>
<td>6.</td>
<td>Mrs. Sifon Odeleye</td>
<td>N/A</td>
<td>University of Ibadan (Q2)</td>
<td>Nigeria</td>
</tr>
<tr>
<td>7.</td>
<td>Mr. Abdulai Barrie</td>
<td>Technical Assistant</td>
<td>National Protected Area Authority (Q1)</td>
<td>N/A</td>
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<td>8.</td>
<td>Mr. Ilhem Lil</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>9.</td>
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<td>Senior Policy Officer, Division of Environment, Climate Change</td>
<td>African Union Commission (Q1)</td>
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<td>10.</td>
<td>Mr. Edward Kilawe</td>
<td>Sub-regional Forestry Officer</td>
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<td>11.</td>
<td>Dr. Joram Kagombe</td>
<td>Deputy Director-Socioeconomic Policy and Governance</td>
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<td>12.</td>
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<td>13.</td>
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<td>17.</td>
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<td>Mr. Muhanguzi M. Geoffrey</td>
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<td>Ms. Grace A. Nchimbi</td>
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