

# **Report on the Outcomes of IFSA / IUFRO side-events on Forestry Education in Africa**

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## 1. Introduction

Covering 30.6 percent of the global land area (FAO, 2015a), forests provide a wide array of ecosystem services that are vital for global food, livelihood and environmental security. Understanding forests in their broader context is essential to manage them in a wise and considered manner, and thus achieve the objectives of sustainable development and ensure the continued availability of natural resources and environmental services for the global benefit of humankind. Forestry education, beyond its traditional role of passing on knowledge, needs to be designed in a way to respond to current and emerging environmental issues, and socio-economic challenges, including meeting youth's needs and aspirations and employers' expectations. Building capacities in Africa is particularly challenging, due to problems like poverty, weak infrastructure and lack of qualified teachers.

During the XIV World Forestry Congress (WFC), held between 7-11 September, 2015, in Durban, South Africa, several African students were invited to discuss, with their international peers, the current state of forestry education in their continent. Sponsored by the International Forestry Students' Association (IFSA) and the International Union of Forest Research Organizations (IUFRO), we (the authors) participated in the event as representatives of forestry students of the African region. The purpose of this report is to summarize our experiences from the IFSA-IUFRO events at the XIV World Forestry Congress and report on the outcomes of the meetings.

## 2. Background

**IUFRO (International Union of Forest Research Organizations)** is *a non profit and non governmental international network of forest scientists, aiming to promote global cooperation in forest-related research* (IUFRO, undated). Founded in 1892, IUFRO is also a member of the *International Council for Science (ICSU)* and is *open to all individuals and organizations dedicated to forest sciences and related disciplines* (IUFRO, undated).

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**IFSA (International Forestry Students' Association)** is a worldwide organization of forestry students from diverse backgrounds and specialisations (IFSA, undated). Founded in 1990, IFSA currently comprises (2015) 73 member associations representing 54 countries (IFSA, 2015). Accepting also *consulting, supporting and honorary members*, IFSA seeks primarily to “*provide a platform for students of forest sciences to enrich their formal education, promote cultural understanding by encouraging collaboration with international partner organizations and facilitating students in gaining practical experiences with a wider and more global perspective.*” (IFSA, undated).

**The World Forestry Congress** is a major conference event, dedicated to the forestry field and organised every six years by the Food and Agriculture Organization of the United Nations (FAO) (FAO, 2015b). The XIV World Forestry Congress took place from 7 to 11 September 2015 in Durban, South Africa. Held for the first time in Africa, the congress focused on the theme “*Forests and People: Investing in a Sustainable Future*” (FAO, 2015b).

### **3. Objectives**

The objectives of our mission were primarily

- To represent African students in forestry during the FAO XIV WFC in South Africa
- To collectively identify the main problems of forestry education in Africa during the workshop
- To discuss in a concerted manner potential solutions for these problems
- To present the outcomes of the meeting both orally and in a report
- To contribute to IUFRO/IFSA events and some special events, as note takers, photographers etc.
- To contribute to Youth events

The secondary aims included:

- To strengthen the initial contacts with the international IFSA network

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- To gain experience on an international forest policy event with the view of possibly organizing a smaller version of the event in Africa with the support of IFSA Development Fund in the near future
  - To start discussion with international IFSA colleagues and enhance the linkages between IFSA and African forestry students' associations
  - To broaden personal and professional experiences in the scientific ambit and update our individual knowledge on the recent research findings and political processes related to forest policy and economics (IUFRO).

#### 4. Key highlights of the events

##### 4.1. Pre-side event workshop on Forestry Education in Africa

Date and time: Sunday 6 September, 09:00-12:00

Venue: Inkosi Albert Luthuli International Convention Centre (Durban ICC), room 21 CDE



Prof. Mike Wingfield (Source: René Kaam 2015)

Organised by Mr. *Vladislav Vojnovic*, Liaison Officer of IFSA-IUFRO, the meeting aimed at identifying the problems faced by African students and proposing potential solutions / remedial actions to enhance forestry education in Africa. About 50 African and international students attended the event. The latter started with an introduction by Prof. *Mike Wingfield*, current president of IUFRO. Ms. *May Anne Then*, the president of IFSA, moderated the activities of the workshop.



Mr. Vladislav Vejnovic and Ms. Anne May Then (Source: René Kaam 2015)

To analyse interactively and compare collectively the challenges of forestry education in Africa, the audience of students was divided into five groups, and the results of each group were presented to the general audience. Discussions for solutions were conducted following the same format. Finally, several questions were formulated, and meant to be addressed during the IUFRO-IFSA joint side event, which followed the workshop for restitution of the outcomes.



Group brainstorming (Source: René Kaam 2015)



Students participating in the pre-side event workshop (Source: René Kaam)

#### 4.2. IUFRO – IFSA joint side event: “Enhancing forestry education in Africa”

Date and time: Tuesday 8 September, 19:45-21:00

Venue: Inkosi Albert Luthuli International Convention Centre (Durban ICC), room 21ABC

Organised also jointly by IFSA and IUFRO, this side event was a continuation of the initial workshop and aimed to review the current state of forestry education in Africa, to discuss the outcomes of the first meeting and to provide a platform for dialogue between students and professionals.



The panelists (from right to left: Mr. **Brendan Marais**, Representative of South Africa at IFSA, Mr. **Dominique Reeb**, Food and Agriculture Organization of the United Nations (FAO), Ms. **Tatenda Mapeto**, International Forestry Students’ Association (IFSA), Prof. **Mike Wingfield**, International Union of Forest Research Organizations (IUFRO), Prof. **Paxie Chirwa**, Southern African Institute of Foresters (SAIF) and the University of Pretoria and Mr. **Willie Louw**, Nelson Mandela Metropolitan University (NMMU))

(Source: René Kaam 2015)

The side event began with introductory remarks from the moderator *Vladislav Vejnovic*, which were followed by a short speech from Prof. *Mike Wingfield*. The latter expressed his delight of seeing active participation of such a diverse group of students in the joint workshop and stressed the strategic importance of forestry education for the future of the forestry discipline and the

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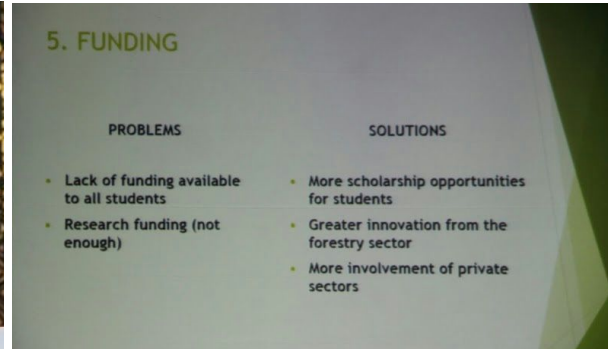
newly established IUFRO-IFSA joint task force for the promotion of forestry education. This opening was followed by a speech from Ms. *May Anne Then*, who stressed the importance of such an exceptional event, bringing together forestry students from diverse horizons to reflect on the difficulties of their curricula. Lastly, she urged the students present to make profitable all what they could gain of this special occasion. Following her remarks, Ms. *Lena Lackner*, Head of Commission of Forestry Education at IFSA, presented the new IFSA/IUFRO joint project, named the “*IUFRO/IFSA Task force on Forestry Education*”, whose aim is to identify gaps and challenges in forest education in order to improve it.



Prof. Mike Wingfield, Ms. May Anne Then and Ms. Lena Lackner  
(Source: René Kaam 2015)

After this series of discourses, the workshop outcomes were presented by two African students, Ms. *Mmetje Trudi Sebelebele* and Mr. *Bamidele Oni*, from South Africa and Nigeria respectively. What came out from their talk is detailed in section 5, with some modifications of the initial presentation. After that, some questions were posed and panelists and audience expressed their views and comments (Annex 1).





Mr. Bamidele Oni & Ms. Trudi Sebelebele presenting the outcomes of the workshop (Source: René Kaam 2015)

The closing remarks were made by Prof. *Wingfield*, who drew the attention of students to the next IFSA Symposium, which will be held in South Africa in 2016 and encouraged them to be more proactive in their search of opportunities.



Group photo of some of the participants at the IFSA-IUFRO side event  
(Source: FABI.net - [http://www.fabinet.up.ac.za/newsitem/288-11-IMG\\_8280A.jpg](http://www.fabinet.up.ac.za/newsitem/288-11-IMG_8280A.jpg) 2015)

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## 5. Workshop outcomes

### 5.1. Problems identified

**5.1.1. Awareness:** Overtime, a little has changed in the regards of public perception of forestry as a profession and as a course of study. Some of the notable reasons are as stated below:

- **Unclear definitions and lack of public awareness:** The general level of public awareness concerning forestry is quite low, most especially in the developing parts of Africa. Although forest significance differ between stakeholders, the main value placed on forests is often the resource and capital generation. While the forestry discipline has been in existence for a while now, still the clarity of the definition is lacking, most especially to the public that still holds the forestry institution in the traditional sense of timber extraction and economic valuation. Information pertaining to the other roles of forests in sustainable development, biodiversity conservation, carbon sequestration, climate regulation, water purification etc. and the recognition of the new paradigm of forestry, namely Sustainable Forest Management, are still lacking.
- **Public perception:** Forestry is viewed mainly as a rural career path, with limited prospects and low wages (case of Nigeria, Akande, 2007, p65) and the possibility of becoming a researcher, an engineer or an executive in international forestry-related companies / organisations are often ignored. This is an affirmative fact considering the limited opportunities for job security after graduation and the already saturated job market, particularly in the public sector, which discourage many potential students from choosing forestry related courses and taking up a career in forestry.

**5.1.2. Governance:** The relative governance systems existing in many African countries have not been adequate enough to support forest-related issues, which impacts on forestry education. Some of the points related to governance discussed during the workshop include:

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- **Inexistent or inadequate policy:** In many instances, there is little to no relevant policies in place addressing specifically forestry and forest-related issues. The situation is such that, even if the policies are available, the feasibility of implementation is often bleak.
  - **Poor and inadequate infrastructure :** Supporting structures within the public sector are deficient and not encouraging, such that necessary openings for feedback and links between the teaching, research and other types of institutions are missing. Furthermore, most public institutions lack the adequate functional facilities needed for normal functionality.
  - **Barriers to private practices in forest industry:** There is quite an obvious limitation to private practices in the forestry industries, as the enabling environment and governmental support and incentives for such activities are lacking. This can be seen by the fact that privately-owned forests in Africa cover only 71 million hectares (11.67%), while public forests extend over 535 million ha (87.99%) (FAO, 2015). With regard to students, opportunities for internships and employment are thus restrained to the public sector, where vacant positions are very limited.

**5.1.3. Pedagogy:** This talks about the theory and the practice of education that obtains in a society. Some of the drawn out problems are highlighted below:

- **Poor background orientation:** This is related to the lack of awareness due to poor information reach and poor societal perception of what forestry is about. In fact, many students in Africa had no prior knowledge concerning forestry as a course of study or probably on the side of it becoming a career.
- **Low quality education:** The problem of low standards of education is a huge issue in most parts of Africa, as a result of the lack of qualified teachers, poor learning facilities, and deficient infrastructure, which lead to poorly conducive learning environment.
- **Curriculum inadequacy:** Most curricula are broad with little consideration given to specialization. Course reviewing and information updating are often not carried over a long period of time.

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#### 5.1.4. **Communication, cooperation and collaboration**

- **Ineffective or inefficient exchange and collaboration programmes:** Most institutions lack the adequate structures and facilities to support existing student/teacher mobility programmes and encourage collaboration, in terms of information / data sharing, which limits the possibilities of efficient learning, teaching and research. In certain countries, access to reports and scientific data may not be easy for students and the general public alike, and, depending on the institution consulted, might require payment (e.g. for time-series of climate data, land use/cover maps etc.). A few web platforms developed for free information sharing exist, but are in majority, either fed with general data, rarely updated, or meant for visualisation only (no options/tools to download scientific data or make advanced analysis).
- **Poor cooperation with national organisms** (government, universities, organisations etc.) Most institutions would prefer to look outside of the continent for potential partnership. This has overtime put a limitation on the inter-relation between forestry-related organizations and institutions in Africa and in a lot of ways has hampered local development.

#### 5.1.5. **Funding:** Funding is a major incentive to encourage and attract more students to studying forestry, but it remains a significant barrier to higher education in the African continent.

- **Funding accessibility:** Although there exists quite a number of opportunities in this regards, access to relevant information concerning funding options is still difficult and the eligibility criteria are often too narrow and exclusive (restrictions by nationality, affiliation, academic background, age, residence area etc.).
- **Insufficient funding of scientific research:** As local governments tend to prioritise other more urgent topics, like health, scientific research receives insufficient public funds. Only 0.6 % of the GDP is spent on research and development in Sub-Saharan Africa, while in the World, the mean expenditure is around 2% of the GDP (World Bank, 2007 data).

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Likewise, only 0.66 % of world scientific publications originate from Sub-Saharan Africa (World Bank, 2007 data).

## 5.2. Solutions proposed

### 5.2.1. Raising Awareness

- **Changing perception through media** : Awareness raising through the media is quite of an advantage in this era in the view of the wide reach and innovative means of information dissemination. In fact, using media may be crucial for fostering a more positive attitude toward forestry as a profession, beyond the traditional sense of income generation and the rural epithet, as well as clarifying the importance of forests and forestry for mitigating the impacts of climate change, preserving biodiversity and contributing to the global environmental balance and integrity. The mass media and the various web-based social platforms, that are freely available on the Internet, can be used to create contents that are easily accessible and understandable to the general public, and thereby harness their support and local influence and ultimately, make prominent the roles of forests and forestry professionals in our societies.
- **Publicity for events and programmes (public appealing)**: There is also a great need for a wider and massive publicity with regards to events and programs relating to the forest theme. For example the existence of the International Day of Forest, an event still ignored by many people and even professionals.
- **Positive endorsement** : In the view of adding significant values to the importance of forests, another suggestion would be to invite diverse organizations and allied bodies in promoting the values of forest. The idea is to promote the significance of the forest on their brands, and through this, more attention would be drawn towards the forest and thus some value addition would be made possible.

### 5.2.2. Enhanced governance

- **Development of adequate policy and effective implementation and commitment to support forestry and establish enabling conditions for private initiatives:** Governments have to come up with workable and feasible policies that would support the

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broadening of the forestry sector to accommodate private practices. This is quite necessary to allow for a shift of focus beyond the mainstream public sector end point. The policies should also be such that would encourage incentives in supporting entrepreneurship in forestry practices in Africa, so that more potential students would have a variety of work opportunities to pick from upon graduation.

- **Institutional revisions to make the public sector more appealing:** Institutional revisions are needed to make the public sector more appealing and to accommodate more diversity in scope and role synopsis. This would in a way give a definitive feedback to the other end of the ladder (Forestry Education Institutions), such that the departmental synopsis is broadened to allow for more course linkages. Also, investments should be made to enhance forestry research facilities across Africa, such that more modern and workable facilities are available for use, which would ultimately encourage internship opportunities for potential students and affiliated researchers and professionals.

### 5.2.3. Quality education

- **Introduction of nature education in primary and secondary schools.** Early education among children and the young people is a very important and feasible strategy to instill in their minds the values of nature, foster environmental consciousness and, why not, get them further interested in nature-related studies or careers paths.
- **More informed orientation advising in high schools:** Improving access to information for students about existing forestry-related programmes and possible funding options, in the form of orientation sessions, workshops, bulletins, individual advising meetings etc. is crucial to help them choose carefully their future academic and career paths and make well-informed decisions.
- **Promotion of specialization programmes/curricula, without losing sight of other related fields:** It is true that forestry is interdisciplinary in nature, requiring knowledge in ecology, agronomy, economy, sociology etc. Global change has in a way established a necessity for the cross-linking of various disciplines, such that there is a common ground of work and interrelated approaches to problem solving. But at the same time, cutting-edge expertise is sought by recruiters to address more efficiently the advanced

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issues faced by companies and organisms (e.g. specialists in population dynamics to find solutions against pest outbreaks in a plantation). Therefore, in-depth specialisation courses / programmes should also be promoted for more focused skill development and to respond to the needs of the work market.

- **Multilingualism:** Learning and mastering the main languages used in Africa (namely English, French and Arabic) would certainly improve the interoperability of students, enlarge their employability prospects and facilitate their integration in international organisations or multinational companies.

#### **5.2.4. Enhanced communication, cooperation and collaboration**

- **Improved inter-institutional cooperation and mobility programmes:** The transboundary character of forests and forestry makes it necessary to ameliorate existing cooperation programmes and establish new partnerships equally at the national, regional, continental and international levels. It is also important to facilitate access to exchange programmes for both students and the teaching staff, to improve their international interoperability, enhance their language skills and benefit from mutual experiences.
- **More effective and efficient use of Information and Communication Technologies (ICT):** ICT tools can be the solution for many of the problems previously mentioned. For example, an effective and well-thought use of ICT systems would enable to facilitate access to information, promote data exchanges and encourage research sharing. But for this purpose, it is also necessary that the content and tools provided are relevant for and adapted to the needs of the targeted users and the whole information system is maintained and updated regularly. Social media may serve to raise awareness or generate donations for forestry-related initiatives and projects. Web-based platforms may be employed for student orientation (e.g. via an up-to-date and comprehensive database of existing university programmes), as well as mentoring. The ICT tools can also be used for building teachers' capacity and sharing best practices. Taking advantage of the Massive Open Online Courses (MOOCs) wave, such Online Learning Environments (OLE) should be exploited to promote education in a more flexible way and support self-education and lifelong-learning.

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### 5.2.5. Funding

- **More inclusive funding opportunities, addressing diversified categories of potential students.** Different funding options (in the form of scholarships, grants, donations etc.) with more complementary eligibility requirements are needed, so that no category of potential students is excluded for non-merit-based criteria.
- **Involvement of the private sector:** The private sector has undeniably an important part to play in improving forestry education. More opportunities for paid internships in private companies would certainly motivate students to choose the forestry track and make them more confident about their career prospect. Also, partnership with teaching institutions for the integration of recent graduates as junior professionals would certainly be a great incentive. Governmental support for private universities/schools offering curricula in forestry can contribute to bridge the gaps in infrastructure and quality deficiencies.
- **Innovative tools for funding:** Greater innovation in financial mechanisms and fundraising means is needed to support student training and scientific research in forestry. Tools like crowdfunding via the Internet appear promising and should be encouraged and facilitated by institutions and organisations.

## 6. Conclusions and recommendations

The recommended events were attended and gave us an insight of major forestry issues at an international level. The coordination by Mr. *Andre Purre* and Mr. *Vladislav Vejnovic* was effective in preparation for the workshop and the knowledge gained through the materials provided was useful and has improved our analytical skills.

In our view, the most important findings about forestry education in Africa were as follows:

- There is a need to redefine forestry by loosening the boundaries of its definitions;
- Forestry education is a challenge for the stakeholders involved;
- There is a need for a mix of knowledge and skills in both social and natural resources to tackle critical challenges such as: invasive plants, water availability and quality, climate



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change, aging society, habitat fragmentation. Nevertheless, specialization courses should also be promoted to respond to specific issues;

- The importance of personal abilities and interpersonal skills is often overlooked in forestry education;
- A university education is more than the curriculum and there is a clear need for more flexible and diverse curricula;
- The curricula have to be reviewed in response to the new professional expectations
- Greater linkage between levels of learning (certificate, diploma, undergraduate, graduate and postgraduate) is needed
- Introducing innovative teaching and learning methods are important to continuously and effectively share new knowledge, ideas, and best practices
- More emphasis on teaching students how to access, synthesize and apply new knowledge
- Capacitate the teachers and training personnel to transmit their knowledge
- Connections between employers and universities is essential to emphasize the full variety of career opportunities
- More effective implementation of forestry education in general

Participating in the XIV World Forestry Congress was really a great experience for all of us. The congress events were very rewarding both academically and professionally, as they gave us the opportunity to meet students, researchers and professionals from all over the world, discuss on different forestry issues and exchange about our experiences and cultures. From an academic perspective, it allowed us to broaden our personal experiences in the scientific field and update our knowledge on the recent research findings. As students from African countries who haven't had a chance to be involved in such a big forestry event before, attending the 2015 World Forestry Congress, and hopefully following future meetings, will expand our knowledge and awareness on the different aspects of forestry and get ourselves more active in this field.

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Thank you IUFRO and IFSA for giving us the opportunity to participate in the XIV World Forestry Congress, exchange with international students and professionals and express our views as student on the topic of Forestry Education in Africa.

Nezha, Jocelyne, Eric, Bamidele, Temitope and Kamuhelo

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## **Annex 1: Questions and answers during the side-event**

A series of approximately six questions was posed in a targeted way to the members of the panel. The remarks which will follow, are an outline of the answers brought by the panelists to the various questions which were asked to them.

### **Question 1:**

**Answer of Pr. Mike Wingfield:** The true question refers to the deep meaning of “forestry”; because it is a very diversified sector. Consequently, it is the responsibility of each student in forestry to define under which aspect of the forestry he would like to specialize himself. Indeed, it is very important for any student to specialize himself as he progresses in his academic curriculum.

### **Question 2:**

**Answer of Mr. Willie Louw:** Education is also a business. Thus, it will also be profitable. In addition, in the direction of the reinforcement of capacities of the students in forestry of the French-speaking zone, one could plan to translate into French and to make available a whole of recent module of formation.

### **Question 3:**

**Answer of Mr. Brendan Marais:** Our governments must invest more in the forestry education and the forest sector. Furthermore, the students in forestry must, if possible, seek to learn one second foreign language to be able to fit themselves professionally in various countries in the world considering the scarcity of the available employment locally.

### **Question 4:**

**Answer of Mr. Dominique Reeb:** In Africa, one must develop new programs which are able to answer to the current challenges of the forestry sector: one must imperatively reform the academic programs in forestry. In addition, FAO is already intending to re-examine how to support forestry education in Africa.

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**Question 5:**

**Answer of Pr. Paxie Chirwa:** The orientation of a forestry student curriculum depends on many factors such as where he/she studies and also, what he/she want to achieve (future career profile).

**Question 6:**

**Answer of Ms. Tatenda Mapeto:** The biggest problem of the forestry education in Africa, is the approach which is not appropriate.