IUFRO Report Side Events at XIV World Forestry Congress

Durban, South Africa

From Stellenbosch University

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Sunday, 6 September 2015: 09:00-12:00

IUFRO-IFSA: Workshop - Forestry Education in Africa.

The workshop was organised to gather perspective from the youth on the problems facing forestry education in Africa, what the youth sees as potential solutions to these problems, and how to implement these solutions.

The youth were encouraged to explain and share their experiences of forestry with others. Some of the objectives of the workshop urged the youth to speak freely, to speak their mind and to not look for consensus or the politically correct things to say.

The outcomes of these discussions were given on 8 September 2015 during the IUFRO – IFSA joint side event: “Enhancing forestry education in Africa”.

World Forestry Congress Opening. 7 September 2015

Many political leaders, researchers and scientists from all over the world attended XIV World Forestry Congress held in Durban, South Africa on 07- 12 September 2015 themed :

Forestry and People: Investing in a Sustainable Future

Prince Laurent of Belgium, Special Ambassador to FAO for Forests and the Environment; Nkosazana Dlamini-Zuma, Chairperson of the African Union Commission; FAO Director-General José Graziano da Silva and Senzeni Zokwana, Minister of Agriculture, Forestry and Fisheries in South Africa were among the speakers who addressed thousands of audience members during the official opening of the XIV World Forestry Congress on Monday the 7th of September 2015. Prince Laurent described the Congress as a "formidable opportunity" to address the challenges facing forests.

Apart from the main plenary events taking place during the congress, IUFRO organised side-event sessions that brought together different researchers, experts and scientists from around the world to present their forest research and projects.

The sessions that ran from Monday to Wednesday are discussed below:

Monday, 7 September 2015, from 12:45-14:15.

Opportunities and challenges for harnessing local forest management to improve rural livelihoods in Africa.

The session used case studies to highlight the challenges facing rural communities in Ethiopia, Gambia, Cameroon, Zimbabwe, and Gabon and how different research is averting the situation.

In Gambia small forest-based enterprises (SFE) generate local income and employment, thereby improving local livelihoods. Small forest-based enterprises (SFE) are central to community forestry initiatives and key for decentralizing and advancing SFE. Communities have the power to use their resources and to promote sustainable use of the forests. The main challenges faced by SFE include lack of access to finance and forest policy that increases the perception of risk of enterprises not being able to pay loans back. Therefore, change is needed to address forest policies that are not supportive to enhancing SFE.

This however, was not the case in countries such as Cameroon and Gabon where the state has more power over natural forests, and are the legal owners of the forest and trees. This has contributed to high levels of illegal harvesting of timber, with the statistics indicating that illegal harvesting of timber provided higher benefits to the community than the formal/legal harvesting. Thus timber marketing is essential to local livelihoods of these countries.

Recommendations: The common theme in all the case studies highlighted the need for more capacity building to enhance business skills of local people. Fostering of partnerships that are transparent, inclusive and effective between local people, governments, NGOs and especially the youth will ensure continuity of local initiatives in Africa. The role of the youth in forest law enforcement at local levels needs to be recognised as youth are essential in promoting the sustainable use of forests in the future. Lastly, there needs to be alignment between policies and application of policies as corruption is hindering the success of efforts being made.

Tuesday, 8 September 2015, from 10:00-12:00.

International Forest and Water Dialogue.

The water dialogue discussed the issues surrounding water and the forestry sector, the impacts that water has on forestry and vice versa.

South Africa's Minister of Water and Sanitation, Nomvula Mokonyane, spoke about South Africa being a dry country and forestry leading the way to water capture and storage. Balanced ecosystems must be created between forestry and water. Policies should be designed and implemented to ensure a fair system that promotes reforestation, clean

drinking water and an equal workforce. Communities must be more involved in forestry activities to provide a future of sustainability and integrated forestry systems.

Mike Wingfield opening as IUFRO president. IUFRO have a number of set goals, one of which is sustainable water and sanitation management. Research shows that trees provide fresh water for domestic use. Trees increase water absorption, storage, distribution and ground water discharge. Deforestation causes major water problems with regard to water flow within a system. Temperature in forests is also cooler and this has a regional effect. However there are still some big research gaps and research is still poorly equipped to measure and monitor these systems continually. The divide between knowledge and policies must also be closed. Insects and diseases pose a great threat to trees internationally. It is important to connect studies on water and forest as well as the effects domestically, regionally and globally.

Key note presenters: **David Ellison.**
Irena Greed.
Richard Harper.

David Ellison: Why Forests matter for water, energy and climate. Using the example of the Nile basin. The total ecosystem was monitored and all effects of water movements measured. Hydrologic space: There is a more inland need for hydro evaporation systems. This is accomplished with land-atmosphere integration, where forests provide more evapotranspiration across continents. The theory is that the further forests grow inland from the coast, the further inland the evapotranspiration effect follows. The question however arises of how much forest is enough? Too much forest can also change the weather patterns completely as forests are rainfall and bio precipitation triggers. Thus removing forests entirely reduces a regions rainfall potential. Forests also have cooling power, where forest-water interactions dissipate heat. Transpiration and evaporation however need solar energy at the canopy level. Thus a lower temperature system is created below a forests leaf area. This leads to a hypothesis that more vegetation leads to a cooler area. Trees drive the infiltration of water and ground water recharge. Trees are capable of cloud stripping or fog precipitation, where trees absorb water directly from the air acting like water silos of sorts. Therefore spatial organisation is very important. The location of a forest is of high importance, land conversion affects the atmospheric moisture and up-and-down wind systems have to be taken into consideration.

Irena Greed: Managing forests for water. Need to focus on the main market value services from forests. Aquatic services are the most valued of these services, by stopping erosion and providing drinkable water. The international interest in these services is not enough as it is difficult to explain to local, uneducated people. All stakeholders and users of these services need be aware and involved in providing these services. A risk management framework has been developed with the ISO system. Namely:

1. Identify an ecosystem contact person and area.
2. Risk identification.
3. Risk analysis.
4. Risk evaluation.
5. Take action.

When managing such a system consideration for the downstream users and services is required. Attention must also be given at cross regional boundaries and climate. The framework for future scenario analysis is:
Identifying the driving forces; identify the uncertainties, social values and environmental change; the future direction; implementing the plan.

There is a need to build a database of hard and soft controls affecting the theories for the future.

Richard Harper: IUFRO taskforce; Need for science to guide policies and management in water, soil and climate change, as well as conservation.

The drivers impacting forests and water are:
Climate change, population increase, wealthier lifestyle and shifting demographics.

Regulations are pushed by policies, industry, technology, the market and fashion. Climate change and forests; forest resilience and how forests systems affect water needs to be examined. Reforestation can improve water quality. He concludes that there is a range of new and evolving issues affecting water, soil and forests in areas. Population impacts, food and water sciences and security are important to our future. The IUFRO taskforce runs a series of workshops on areas of uncertainties; invites short presentations and are involved in future themed side events.

The Minister of Water and Sanitation, He Nomvula Mokonyane remarks:

There is a need for science and a need for decision makers to get involved in these programs of research and change. There is a need for an international drive for sustainability especially in water security. In South Africa climate change pushes us for solutions of short-to medium term instead of the usual long-term solutions. There is a need for a multi-sector approach with policy makers pushing the development of good policies.

8 September 2015, from 12:45-14:15.

IUFRO Directors' Forum: Crossing science boundaries for the benefit of forests and people

Dr. Mike Wingfield, IUFRO president was among the panellists that attended the event. He briefly discussed the role of IUFRO and its contribution towards forestry research. The event discussed what drives research in forestry and the role of business and the research community. The main theme focused on the role of forest researchers, and how forest policies could be adapted in these changing times. The discussion highlighted climate change and global social changes as the most important drivers to the future research in forestry.

Mike Wingfield also highlighted the conflicts that arise between global networking and business driven research, as industry focuses more on return on investment while research institutions focus on output and quality of research. Thus finding the balance between business environment and academia is important. Communication was seen as the key to finding the balance between the interests of business environment and academia. Researchers need to make efforts to engage with and understand private sector and policy makers.

FORNESSA showed that Africa has one of the weakest institutional capacity for scientific research in the world with only 2% of research publications conducted on the continent. Inadequate opportunities for scientific collaboration among research institutions and marginalisation attributed to this problem. In Sub-Saharan Africa imbalances arise when private sector expects research institutes to produce research without funding the research.

Governments are also not doing enough to promote private institutions to get involved in forestry research activities. Their responsibility is to find instruments to incentivise research and to fund applicable and important research.

Recommendations: Forest science needs to adapt to current relevant issues and shift away from traditional methods as there is pressure to move from traditional methods to value. It needs to shift to broader ecosystem services, biodiversity and conservation issues. Research needs not only end with products, but with knowledge and technology. The ideal model would be where private sector leads with government facilitating. Lastly, research institutes need to focus more on producing all round students who will remain relevant in the job market rather than producing students just for industry. Universities need to equip students to produce research that is more relevant to societal needs.

Tuesday, 8 September 2015, from 19:45-21:00.

IFSA-IUFRO joint side event: "Enhancing Forestry Education in Africa"

The event was aimed at discussing the current state of forestry education in Africa and provide a platform for dialogue between students and professionals. It was a continuation of the pre-side event workshop where students identified the main gaps and challenges in forestry education in Africa. The event outlined challenges facing forestry education in Africa and how to go about promoting forestry education and creating awareness to attract more scholars to enrol in the field. It was one of the sessions that attracted many youth who attended the world congress.

Lack of awareness and poor public perception of the forestry sector were identified as main problems facing forestry education in Africa.

Forestry needs long-term sustainable marketing to become a popular career choice thus the introduction of forestry-related subjects at primary school level was seen as a possible solution to creating awareness in children at an early age. This could lead to promoting passions about forestry in young children and creating awareness for the field.

Recommendations: Students are concerned about forestry education as it affects all. Integrating the youth in decision-making and getting them more involved in forestry awareness campaigns is essential. Forestry education needs to be practical to make connection between the youth and forests. We also need to make studying forestry economically attractive to young people. Forest education challenges can only be solved with partnerships, therefore, private sector/ civil society also need to become more involved in forestry higher education institutions.

Wednesday, 9 September 2015, from 10:45-13:00

International forests and water dialogue: from discourse to action

Forests use water just as they provide them. Forests and trees regulate surface and ground water flows; maintain high water quality and help reduce water related risks. These were the key points at the event that launched a five- year Forests and Water Action Plan.

The event brought different expert groups from around the globe to discuss challenges facing forest and water policies and their ideas on forests-water management. They indicated that policies need to shape water and forestry agenda by bringing them together through institutional mechanisms, dialogue and harmonise trade-offs and frame works. Policy makers were called upon to take into account water and forestry interactions as gaps between science and policies lead to misconceptions.

Going forward a Forest and Water Network was suggested to act as a platform for knowledge sharing and to forge partnerships between scientists and governments for research. Through

group discussions, ideas of what should be included in such a Forest and Water Network included:

- Encourage community participations.
- Global networking such with the help of the internet.
- Investing in young scientists to carry out more research.
- Conduct case studies to find gaps.
- Promote the value of forests and involve indigenous knowledge.

9 September 2015, from 18:15-19:30

Global Forest Science Collaboration-Investing in knowledge generation, capacity building and education in forestry.

IUFRO presented some of its success stories in terms of research with action. As a result of joint international cooperation IUFRO research impacted on the reduction of CFC production and resulted in a decline of sulphur pollutants. IUFRO responds to civil society's needs for expertise and knowledge.

In developing countries however, there are serious problems of dwindling capacity of research. To address dwindling capacity of research in Africa we need to focus on building capacity and maintaining it. Partnerships are very important as global challenges facing forestry can only be solved with partnerships. Investing in science was identified as investing in the future as it allows us to make well informed decisions in terms of policies, i.e. going from knowledge to practice.

The youth stated that society is lacking knowledge about forestry at a primary school level and even at a tertiary school level there is a lack of knowledge of the products and careers in forestry. At a tertiary level there is also no clarity on exactly what industry, government or research expects from students. Youth suggested that research and industry sectors arrange a meeting where students from tertiary levels can speak to the role players of the industry, government, and research institutions to assess the standards of the curriculum and to modify the curriculum to the needs of industry and research.

Mike Wingfield from IUFRO and Michael Peter from FSA answered that South Africa has some of the best tertiary education systems in the world. From a research perspective a person is only recognised as a researcher after they have obtained a PhD, while in most cases that is already too advanced for a working career. Industry is represented on both Stellenbosch University and Nelson Mandela Metropolitan University's academic boards and will therefore have to meet with both of these boards in order to find a solution.