

**Side Event**

**Tuesday 5<sup>th</sup> of November 2019**

Green Forest Jobs in a Circular Economy

# **Next Generations Perspectives on the Future of Forest Work**

**A Side Event**

**organized by the ToS on Green Jobs in the Forest Sector  
and the EFI-IUFRO-IFSA-project  
on the future of employment in the forest sector**

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**«Nothing is more empowering than  
having a job»**

**Key message 1**

# Side Event Programme

## Green Forest Jobs in a Circular Economy

- Welcome (Diarmuid McAree)
- Green Forest Jobs in a Circular Economy: Findings of the Madrid Workshop (Josef Herkendell)
- Students' Views on Future Jobs and Education in a Changing Forest Sector (Juliet Owuor)
- Commentary: Future of Work in Forestry (Walteri Katajamäki)
- Discussion (Carmen Avilés)
- Summing up the Key Findings (Diarmuid McAree).

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**Green Forest Jobs in a Circular  
Economy:  
Findings of the Madrid Workshop**

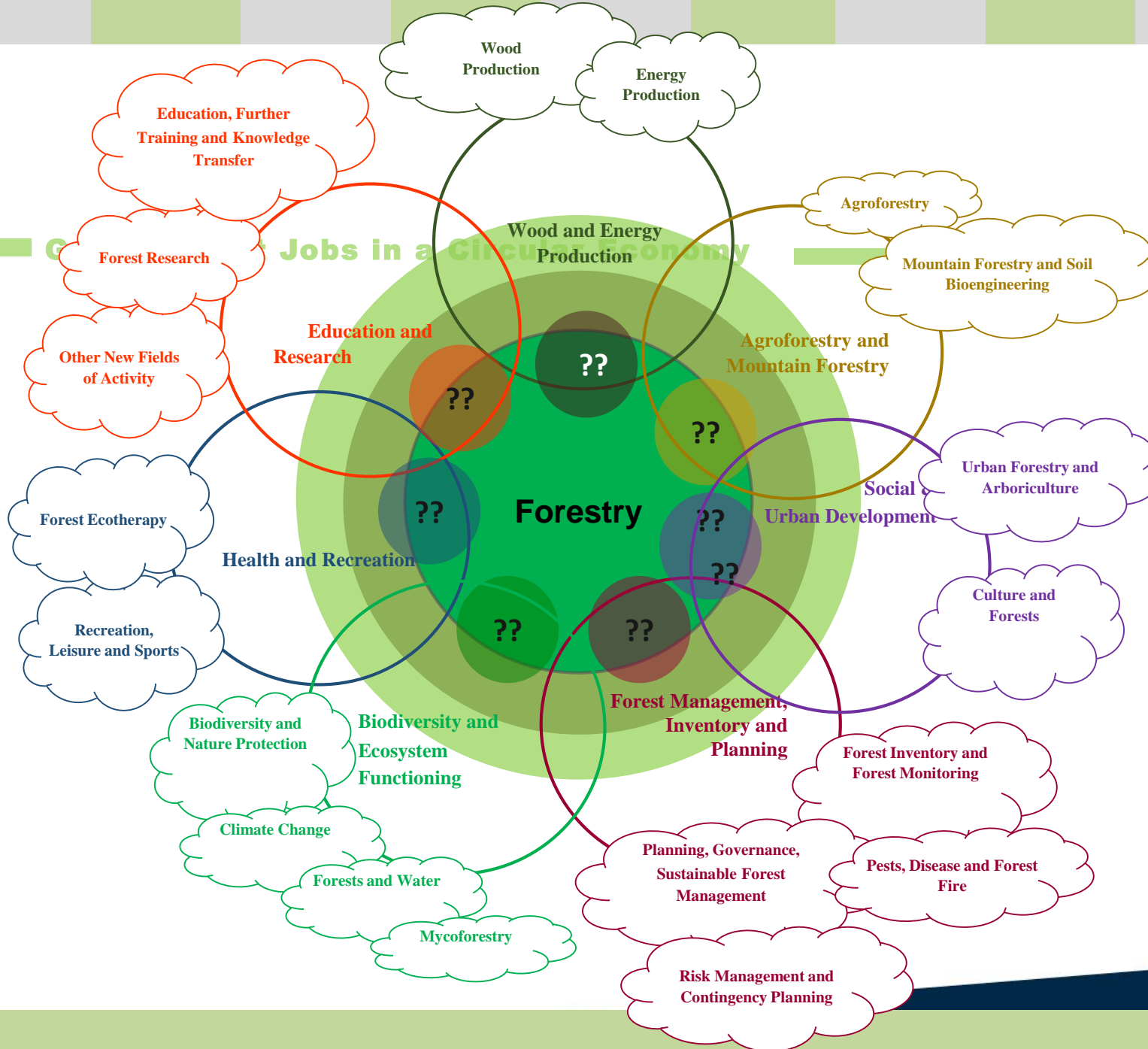
**Josef Herkendell**




# Starting point I: Megatrends will shape the future

## Green Forest Jobs in a Circular Economy

- **Climate change impacts** and adaptation measures
- Globalization; **urbanization and growth of world population**; demographic changes, **migration** and work migration
- General changes in working and living conditions i.e. new **media/digitalization, technical innovation**, further automation (industry 4.0); global markets
- **Changes in land use**; shrinking natural resources; forest fragmentation, loss of biodiversity; **afforestation and restoration of forests**
- Shifting and adapting **societies demands** which are depending on forest ecosystem services - growing importance of non timber benefits provided by forests and trees in the context of **human health**, e.g. **recreation** and forest ecotherapy

# Starting point II: 19 fields of action



-  traditional / current Green forest jobs
-  current non-traditional Green forest jobs
-  new Green forest jobs

# Five Key Findings of the Madrid Workshop

## Green Forest Jobs in a Circular Economy

- **Visualization:** What makes the workforce go for green jobs? Visualization using IT and social media might attract the young and help to understand their work motivation
- **Use climate change as a driver** to implement concrete actions to create green jobs using the wider bioeconomy policies and placing the forest sector in the center
- There is a big change going on for green jobs in forestry, especially due to climate change, mandate from society and international commitment that we have to fulfill and **to educate and to consult** governments, employers, workers and especially young students, considering the increasing uncertainty, when we look forward for 10, 20 or even 30 years.
- Identify the most important issues and **share experiences amongst countries** concerning legislation, regulations and incentives to promote best forest practices
- **Continuous Professional Development (CPD)** should be undertaken by forest work force through a common framework curriculum.
- **New networks and partnerships** needed, e.g. climate change programmes, agriculture, digitalization. We therefore have to **join other relevant foras**.

# **European Forest Institute**



# **Students' views on future jobs and education in a changing forest sector: Insights for professionals, decision makers and institutions**

**Juliet Achieng Owuor**

**Juliet.achieng@efi.int**

# Outline

## **I. Introduction**

- **Project partners**
- **Goals and objectives**
- **Research approach**

## **II. Changes in global forest sector employment (results from literature review)**

## **III. Focus group discussion results on**

- **future professions in the sector**
- **Future skills and competencies requirements**

# Project partners



# Funded by:



## Overall goal

- Global student networking, capacity building and research on employment in the forest sector including green jobs

## Project objectives

- Changes in forest sector employment
- Future trends expected and green jobs developments
- Skills and competencies requirements

# Research approach

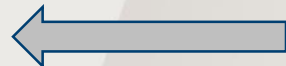
Literature review on future of employment;  
exploring green jobs



Experts workshop on employment, forest education and green jobs in Bonn



Analysis of employers demands  
'speed interviews'



Global survey among global IFSA networks on employment

# Part II

## Changes in employment

# How is employment changing in the forest sector?

**Quantity: decreases  
and increases**

**Changing profiles,  
composition and skills  
requirements**

**Improved quality/  
decency (Green jobs)**

# Changes in the global forest sector employment

## Increasing and decreasing numbers of forest workers

- Increasing global competition resulting in increasing and decreasing numbers of forest workers in different regions
- Ambitious measures towards productive functions in some regions which in turn increase employment opportunities  
(plantation establishment, afforestation measures, investments)
- Increased employment options for foresters in other closely related sectors such as agriculture, rural development, environment, tourism



# Changes in the global forest sector employment...

## Changing profiles, composition and skills requirements

- Expanding scope and diversity of the sector causing a modification of the roles of forest workers
- Structural and work organization changes as a result of mechanization, contracting and outsourcing and technological advancements
- There is an increase in the number of women employed in the forest sector resulting from policies on affirmative action
- Low numbers of forestry graduates and skilled workers
- Emergence of research and non-governmental organisations as alternative employers

# Changes in the global forest sector employment...

## Improved quality of jobs/decency (Green jobs)

- International deliberations and policies resulting in decent employment opportunities in the green economy

(Changing production and consumption patterns)

- Improvement in workers' safety and productivity

(resulting from regulations to promote training for machine operators)

# Part III

## Focus group discussion results

## Focus group discussions

### International Forestry Students' Symposium (IFSS), 2019

- Organised annually by the International Forestry Students' Association (IFSA)
- Over 40 IFSA students participated in the discussion

Three questions were asked to the participants:

- understanding of the forest sector,
- which new professions will emerge in the sector and
- what skills, competencies and knowledge will be required in the future for these new professions.

# New professions in the forest sector in the future

- Carbon stock banker/forester, climate adaptation specialists, biomass and green energy
- Remote sensing and GIS specialists, Economic evaluation of ecosystem services
- Landuse consultants to reduce conflicts among land uses, wood engineers
- 2100: cloud manager to move clouds through special technology and scientists researching on different places to establish forests e.g. other planets

# New professions in the forest sector in the future

- GIS, pilots and drone operators, recreation/guides, hunting, programmers
- Green burial (forest cemetery) and urban foresters, forest healers
- Green care related to physical and mental health and well-being, pharmacists in medicinal forestry
- Teaching forestry to younger students (Forest kindergartens) and awareness
- Construction (using timber for buildings), and block chain specialists

# Skills and competencies required

Subject specific skills	IT and statistics	Social and people-oriented skills
	<p>Computer and IT</p> <p>Robotics</p> <p>Programming</p> <p>Statistics</p>	<p>Languages</p> <p>Gender competencies</p> <p>Mediation and psychology</p> <p>Conflict resolution, communication and negotiation</p> <p>Ability to work across different sectors</p> <p>Arts and sciences interactions</p> <p>Leadership</p> <p>Planning and improvisation</p> <p>Innovation and creative thinking</p>

## Conclusion

- Many trends in employment can be observed in the forest sector, some of them are promising while others are a threat to the future of the sector
- The changes happen at global, regional and country scales
- Green forest jobs is one of the most prominent trends and could be in form of green restructuring, **new opportunities** or greening of existing jobs
- Skills and competencies requirements will also change as a result of the changes in employment needs
- There will be a demand for highly skilled foresters with a different skills set





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*Connecting  
knowledge  
to action*



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# Thank you!

For more information:

**Juliet Achieng Owuor**

**[juliet.achieng@efi.int](mailto:juliet.achieng@efi.int)**

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**Commentary:  
Future of Work in Forestry**

**Walteri Katajamäki**

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**Discussion:**

**Expected development in the region?  
Experiences and examples?**

**Facilitation: Carmen Avilés**

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**«Forest Ecosystem Services +  
Trends/Challenges + Innovation =  
Forestbased solutions  
+ Green Forest Jobs»**

**Key message 2**

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**Green Forest Jobs in a Circular Economy**

**Green Forest Jobs  
lead to Green Forest Careers  
and they are a key component  
of the Future Circular Economy:  
our work continues!**

**Key message 3**

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**Summing up  
the key findings of the discussion**

**Diarmuid McAree**