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
«Nothing is more empowering than having a job»

Key message 1
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 (Waltteri Katajamäki)
- Discussion (Carmen Avilés)
- Summing up the Key Findings (Diarmuid McAree).
Green Forest Jobs in a Circular Economy: Findings of the Madrid Workshop

Josef Herkendell
Starting point I: Megatrends will shape the future

- 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

Green Forest Jobs in a Circular Economy

- Forestry
- Education and Research
- Other New Fields of Activity
- Health and Recreation
- Wood and Energy Production
- Social & Urban Development
- Biodiversity and Ecosystem Functioning
- Forest Management, Inventory and Planning
- Agroforestry and Mountain Forestry
- Urban Forestry and Arboriculture
- Forest Inventory and Forest Monitoring
- Forest Research
- Forest Ecotherapy
- Recreation, Leisure and Sports
- Mycoforestry
- Climate Change
- Forests and Water
- Biodiversity and Nature Protection
- Pests, Disease and Forest Fire
- Risk Management and Contingency Planning
- Planning, Governance, Sustainable Forest Management
- Urban Development

Legend:
- Green forest jobs
- Green forest jobs
- Green forest jobs
- New Green forest jobs
- Traditional / current
- Current non-traditional
- Other New Fields of Activity

Map of fields of action:
- Forests and Water
- Biodiversity and Nature Protection
- Education and Research
- Forestry
- Mycoforestry
- Health and Recreation
- Other New Fields of Activity
- Recreation, Leisure and Sports
- Wood and Energy Production
- Social & Urban Development
- Biodiversity and Ecosystem Functioning
- Forest Management, Inventory and Planning
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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 workforce 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

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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 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

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<tr>
<th>Subject specific skills</th>
<th>IT and statistics</th>
<th>Social and people-oriented skills</th>
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<td>Computer and IT</td>
<td>Languages</td>
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<td>Robotics</td>
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<td>Programming</td>
<td>Mediation and psychology</td>
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<td>Statistics</td>
<td>Conflict resolution, communication and negotiation</td>
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<td>Planning and improvisation</td>
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<td>Innovation and creative thinking</td>
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- Programming
- Statistics
- Computer and IT
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
Connecting knowledge to action
Thank you!

For more information:

Juliet Achieng Owuor
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Commentary: Future of Work in Forestry

Waltteri Katajamäki
Discussion:
Expected development in the region?
Experiences and examples?

Facilitation: Carmen Avilés
«Forest Ecosystem Services + Trends/Challenges + Innovation = Forest-based solutions + Green Forest Jobs»

Key message 2
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
Summing up the key findings of the discussion

Diarmuid McAree