Green Jobs in the Forest Sector
Side Event

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Chair: Andreas Bernasconi (CH)
Co-Chair: Diarmuid McAree (IRE)

Presentation and Moderation by Co-Chair Josef Herkendell (D)
• Introduction
• Trends in Forestry sector
• Definitions
• Results
  Examples from over the world / required skills
• Identified Challenges
• How big is the potential?
• Development and networks
• Conclusions
• In search for a reliable basis – next steps
The link to the website of the Workshop on Green jobs in the Forest Sector which includes presentations:  
http://www.unece.org/index.php?id=48714  
The link to the updated UNECE/FAO website on Green Jobs (which includes information about the ToS) http://www.unece.org/forests/areas-of-work/policy-dialogue-and-advice/green-jobs.html  
• Forest sector employment decreased throughout the ECE-regions by 21% from 2000 – 2010 (UNECE and FAO 2015)

• The contribution of the forest sector to GDP (gross domestic product) decreased from 1.2% to 0.8% from 2000 – 2011 (374 Bill. $ to 286 Bill. $) in ECE (UNECE and FAO 2015)

• The number of forest-related public employees in Europe reported in 2014 is around 14% lower than that reported in 2010. (FOREST EUROPE 2015)
What is a Green Forest Job?!

A green forest job …
▪ … complies with the principles of Sustainable Forest Management (SFM),
▪ … contributes to the green economy,
▪ … and is involved in the value chain of forest products and/or in the performance of forest services.
(underlying definition of the ToS)
▪ Green jobs are decent jobs which (i) reduce consumption of energy and raw materials; (ii) limit greenhouse gas emissions; (iii) minimize waste and pollution; (iv) protect and restore ecosystems; and (v) enable enterprises and communities to adapt to climate change (ILO 2013b).

Nothing is more empowering than having a job.
Global Megatrends

- Climate change impacts and adaptation measures
- Globalization; urbanization and growth of world population; demographic changes, migration and work migration
- General changes in working conditions i.a. new media/ digitalization, technical innovation, further automatization (industry 4.0); global markets
- Changes in land use; shrinking natural resources; fragmentation of forests, loss of biodiversity
- Shifting and adapting societies demands which are depending on forest ecosystem services - growing importance/request on non timber benefits provided by forests and trees in the context of human health, recreation f.ex. and other areas
19 Fields of Activity
Proposed outline

- traditional / current
  Green forest jobs
- current non-traditional
  Green forest jobs
- new
  Green forest jobs
• The forest mycelium is a biomolecular superhighway.
  o www. – wood wide web (communicating with its environment).

• Ecosystem hydrology – Integrated constructed wetlands-enhanced water quality by judicious tree planting in riparian zones for flood control.

• Working with mycorrhizal fungi in forests opens up different fields such as mycoremediation and biological control by utilising mycorrhizal benefits and interactions.

Myco-forestry
Skills, Expertise and Green Forest Professions

- Mycology researchers.
- Specialists in mycology laboratory diagnostics.
- Forest mycologists, specialists in fungal taxonomy.
- Specialists in Myco-remediation and biological control.
- Managers of fungal forests.
➢ Healing by α-Pinene and Limonene
   (volatile organic compounds within forests)

➢ > 44 accredited „Forest Bathing“ areas in Japan
   (they are spreading all over the world)

❖ Forest Ecotherapists are promoting non-timber forest health benefits by combining new forest health research with a basic knowledge of medical issues.

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<th>Forest Ecotherapy</th>
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<td><strong>Skills, Expertise and Green Forest Professions</strong></td>
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<td>• Research and dissemination of knowledge about forest healing effects.</td>
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<td>• Forest Ecotherapists</td>
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<td>• Medical Doctors working in forest therapy centres</td>
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<td>• Sports professionals, forest health coaches</td>
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<td>• Forest Educators and guided walks leaders…</td>
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Thematic area: Health & Recreation
Example / Field of activity Recreation, leisure and sports

➢ 252 - 350 Mill. annual day visits to GB woodlands; tendency is increasing. (survey data from 1998 to 2003)

➢ > 650 special forest recreation sites with different recreation facilities in Great Britain. (parking, information, refreshments, visitor shops, …)

❖ Working in that field one is responsible for balancing forest and visitor needs and engaging in important public relations, information & communications work.

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<th>Recreation, leisure and sports</th>
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<td>Skills, Expertise and Green Forest Professions</td>
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<tr>
<td>• Recreation foresters</td>
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<td>• Forest rangers</td>
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<td>• Forest tourist guides</td>
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<td>• Outdoor Pursuits Activities Organisers</td>
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The > 70,000 trees of Melbourne city are valued at $650 million. (incl. health, amenity and microclimate effects)

Melbourne`s trees receive letters of love. (instead of those reporting damages)

Urban foresters have to handle the special needs & demands of urban society as well as the special needs of urban trees associated with harsh and extreme growing conditions.

Urban forestry

Skills, Expertise and Green Forest Professions
- Urban Foresters
- Forest landscape gardeners
- Urban Forest Planners / Green urban Infrastructure Managers
Multifunctional services/measurable benefits of urban forest and green areas for human health

- Increased physical activity and reduced obesity
- Reduced stress levels and improvements in mental health
- Reductions in noise levels – which can improve mental and physical health
- Lower levels of violence and crime – which can reduce the risk of many health outcomes
- Improvements in hospital recovery times
- Increased social interactions which can help to improve overall well-being
- Saving costs in the health sector

(source: Faculty of Public Health London 2010)
And the contribution of Green Forest Jobs

3 Good Health and Well-Being

Ensure healthy lives and promote well-being for all at all ages

…promote the huge physical and physiological health benefits of forests and provide appropriate offers for society.

11 Sustainable Cities and Communities

Make cities and human settlements inclusive, safe, resilient and sustainable

…promote and manage green infrastructures and urban forests within cities for a better live quality.
The forest sector can play an important role in the provision of these jobs to boost not only the green economy; but also all the economy in rural places. Green Jobs should be funded by rural and urban development programs.

The estimated potential of Green Forest Jobs varies from country to country from region and region and also on local level.

Big variety of existing examples e.g. ranging from forest chainsaw-operator to biodiversity assessor to natural space eco tourist ranger to pine resin tapper.

Many existing specific training courses and education programs.
There are new initiatives, networks to work with the benefits and products of forest ecosystem services, e.g.:

- **Nature accelerator**: [www.ecostarhub.com](http://www.ecostarhub.com)
- **Innovation for Forest Ecosystem Services**: [www.sincereforests.eu](http://www.sincereforests.eu)
- **Research on European NonWoodProducts**: [www.star-tree.eu](http://www.star-tree.eu)
- **Research on urban forestry & sustainable cities**: [www.greensurge.eu](http://www.greensurge.eu)
Management of Forest Ecosystem Services is the central pillar for Green Forest Jobs
Forestry: “The science or practice of planting, managing and caring for forests.”
Bridge between Forest Ecosystem Services & society/markets.

Need for continuous monitoring of trends, changes and new developments in Industry, Service sectors, societies, Innovation in the context of forestry (e.g. foresight analysis)
“Skills are the knowledge, aptitude and competences necessary to perform a task. … Skills development can promote innovation …” (ILO 2010, draft guidelines)

- Major changes -> education, initial training, life-long learning and continuous re-training.
- *Initiation of pilot-projects, support of start-ups.*
- *Continuous adaptation of existing education curricula; if needed establish new education programs.*
Intensive collaboration between education/research institutions and practice needed; knowledge transfer in both directions is also needed!
Partnerships drawn from different sectors and disciplines should be encouraged.
Creation of innovative exchange-platforms, sharing knowledge, experiences and examples
Adaptation of forest policy agendas to new developments
Communicate widely that Green Forest Jobs are support sustainable development and SFM
Adapted strategies and actions needed

How big is the potential? And what are its consequences?
Thank you