



BOOK OF ABSTRACTS

Portorož, 24 – 25 October 2024



EQUALITY AND DIVERSITY IN FORESTRY: CHANGING THE IMAGE OF FORESTRY

Interreg
Danube Region



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INTERNATIONAL CONFERENCE
FEM2FORESTS AND WOFO INTERNATIONAL

EQUALITY AND DIVERSITY IN FORESTRY: CHANGING THE IMAGE OF FORESTRY

Book of Abstracts

24 – 25 October 2024

Portorož, Slovenia

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AGENDA

THURSDAY, 24. October 2024

- 08:00-09:00 Arrival of participants and registration
- 09:00-09:20 **Welcome speeches**
- Alenka Korenjak, Ministry for agriculture, Forestry and Food
- Gregor Danev, Director of Slovenia Forest Service
- Dagmar Karisch-Gierer, Chairwoman of WOFO International
- Nike Krajnc, Director of Slovenian Forestry Institute and Fem2forests Project manager
- 09:20-09:50 **Keynote speech:** Rooted in Diversity: Women Changing and Shaping the Future of Science (and Forestry) (Zarja Muršič, ONA VE)
- 09:50-11:15 **SESSION 1: WORKFORCE OF TOMORROW - A GENDER PERSPECTIVE**
- Why not forestry? Comparative analysis of barriers and needs for inclusion of girls and young women in forestry (Mateja Karničnik, Fundacija PRIZMA)
- How a Massive Open Online Course ForGEDI can address students' motivations, hesitations, and obstacles in forestry-related sectors (Tidora Rogelja, University of Padova)
- EDUCATION BASED ON EQUALITY – an example from adult education (Nevenka Bogataj, Slovenian Institute for Adult Education)
- 11:15-11:45 Coffee break
- 11:45-12:45 **SESSION 2:** Education based on equality and diversity in forestry
- The future of women's employment in peripheral industrial regions (Jani Kozina, Geografski inštitut Antona Melika, ZRC SAZU)
- Uneven ground: navigating gender and diversity in the forestry sector (Barbara Öllerer, University of Natural Resources and Life Sciences Vienna)
- The FOPER project as a driver of the regional network in research and education in forest policy and economics (Mersudin Avdibegović, Faculty of Forestry - University of Sarajevo)
- 12:45-13:45 **SESSION 3:** Changing the image of forestry by inclusion of women
- Rooted inequalities in Forest Education. Insights from a students' perspective (Nikolina Mencin, International Forestry Students' Association IFSA)
- Beyond Stereotypes: The Evolving Role of Women in Forestry (Marija Jakopin, Private forest owner)

EMBOSCADES. Dones i bosc (Women of the Forest): Creating new spaces and values through women perspectives in the forestry sector in Catalonia (Michele Curel and Ester Blanco, Forest Land Ownership Center of Catalonia)

13:45-15:15 Lunch

15:15-16:30 **SESSION 4:** Networking of women as a key of change in forestry

German Women in Forestry association: a success story (Birgit Homann and Maren Ammer, German Women in Forestry association)

We can - a campaign of women foresters in Mongolia (Khishigjargal Mookhor, and Delgerjargal Dugarjav, 'Forest, sustainability, and women' NGO, Mongolia)

WOFO – Opening the umbrella (Dagmar Karisch-Gierer, WOFO International)

16:30-17:15 **PANEL DISCUSSION:** Cooperation is the key for success

Alina Chifan (Egger Enterprise, Romania)

Ragnhildur Freysteinsdóttir (Icelandic Forestry Association, Iceland)

Iza Pigan (Polish association of Women in Forestry, Poland)

Delgerjargal Dugarjav ('Forest, sustainability, and women' NGO, Mongolia)

Alenka Verbole (Slovenian Women's lobby)

Alexandra Sieber (Technical Forestry High School in Bruck/Mur, Austria)

Lesya Loyko (NGO FORZA, Ukraine)

FRIDAY, 25. October 2024

9:00 -17:00 **Study visit to Slovenian karst**

Cerje - Monument of Peace and Observation Tower (Miren Kras)

Visiting the site and discussion about post fire restoration of Goriški Karst (Slovenia Forest Service, regional unit Sežana)

Forest fires and forestry communication (Slovenia Forest Service)

Planting trees

Visiting forests at Karst region:

Dobravlje – oak forests

Povirje – black pine stand

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PREFACE

WOFO - WOMEN IN FORESTRY INTERNATIONAL

Forestry is of great importance in many parts of the world, both economically and ecologically - developments such as climate change are threatening forest ecosystems worldwide.

The involvement of people of all ages and genders is essential to meet these challenges, with young girls and women being among the pioneers of a sustainable future for our forests. To motivate and encourage them to do so, it is necessary to change the image of forestry from a traditional, male-dominated profession to a modern sector that opens up a wide range of opportunities and a broad field of activity.

WOFO, as an international network for women in the forestry and timber industry, is proud to be part of this change as the co-organiser of this conference.



Dagmar Karisch-Gierer,

Chairwoman of WOFO International

INNOVATIVE PATHWAYS FOR EFFICIENT INVOLVEMENT OF GIRLS AND YOUNG WOMEN IN THE FORESTRY SECTOR

The forestry sector, traditionally dominated by men, is undergoing a transformative shift towards inclusivity and diversity. The project “Innovative Pathways for Efficient Involvement of Girls and Young Women in the Forestry Sector” aims to address the gender imbalance by creating opportunities and fostering an environment where girls and young women can thrive.

This initiative, co-funded by the European Union, seeks to tackle the challenges of labour shortages and declining interest among young women in forestry careers. By developing innovative career pathways, enhancing gender perspectives in forestry education and establishing supportive frameworks, we aim at significantly increasing the participation of women in this vital sector by 2030.

Our goal is to change the image of forestry to make the forestry sector more attractive and inclusive for future generations. By empowering and supporting young women, we bring fresh perspectives and innovative solutions to the industry, contributing to its sustainable development and resilience.

The international conference “Equality and diversity in forestry: Changing the image of forestry” brings together researchers, foresters and other professionals to exchange views, present good practices and discuss different options. Let’s use this unique opportunity and sow the seeds of change in forestry!

Dr Nike Krajnc,

Coordinator of the Fem2forest project, Director of the Slovenian Forestry Institute



WOFO International

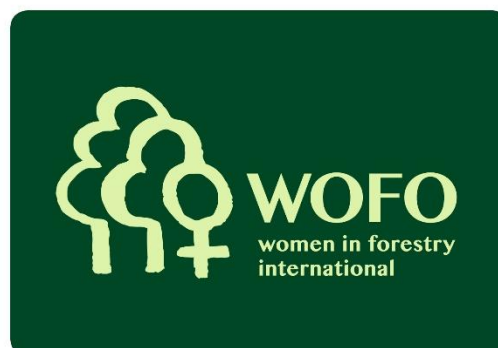
At the international women forester conference on November 17th, 2022 in Bled/Slovenia, women foresters from 6 European countries announced the founding of the international umbrella organization "Women in Forestry International" (WOFO).

The association wants to network women in the forest and timber industry at national and international level, act as a contact for politics, the media and companies, and initiate and support research and projects on women in the forest sector. Because

the industry is still strongly influenced by men, and women represent a clear minority or are even "the first". This is often accompanied by problems, from the feeling of being a lone fighter to very practical problems such as a lack of suitable work clothing and tools for women.

"It's about sharing knowledge and experience and mutual support. And it's about role models and the visibility of women in the forestry and timber industry," says the new chairwoman Dagmar Karisch-Gierer about the goals of the new association. The founding members make up the six-member board. Dagmar Karisch-Gierer represents the Austrian association "Forstfrauen", her deputy Iza Pigan the Polish "Stowarzyszenie Kobiet Lasu". The secretary is Ragnhildur Freysteinsdóttir from Iceland, her deputy Maren Ammer as delegate of the German "Women in Forestry eV". Treasurer is Nike Krajnc as Slovenian representative with her deputy Lesya Loyko from Ukraine.

The official seat of the association is Sankt Barbara im Mürztal/Austria. The founding members found each other in the EU-funded project "Fem4Forest - Forest in Women's Hands", international project co-founded by Interreg Danube, European Union (ERDF, IPA II, ENI-UA), which took place in 2020-2022.



Fem2forests PROJECT

In January 2024, a consortium of 15 project partners launched an international project Fem2forests: Innovative pathways for efficient involvement of girls and young women in the forestry sector. The project is co-funded under the Interreg Programme Danube Region. The project involves 15 partners from 9 countries (Slovenia, Croatia, Austria, Germany, Bosnia and Herzegovina, Serbia, Romania, Czech Republic, Ukraine). The leading partner of the project is the Slovenian Forestry Institute and the project leader is dr. Nike Krajnc.



There is a shortage of labour in forestry and other forestry-related sectors, and interest in careers in this sector is also declining. Nevertheless, forestry is known for creating "green jobs" that not only contribute to the preservation of forest ecosystems, but also ensure the sustainable production of forest wood assortments and non-timber products. The Fem2forests project builds on the foundations of the previous Fem4Forest project (DTP3-500), which gave us an insight into the position of women in forestry in the Danube region and is also a motivation for further work with girls and women in forestry.

The aims of the Fem2forests project are: 1) To develop innovative career paths for girls and young women; 2) To strengthen the capacity of forestry education institutions by integrating the gender equality aspect and 3) To create favourable conditions for the effective inclusion of women at different levels in forestry and forestry-related sectors.

To achieve these goals, the Fem2forests concept follows an interactive and innovative model that involves different actors and covers different levels of career paths in forestry, from the early stages of orientation to leadership positions. Various methods are used to identify the needs and interests of girls and young women in the forestry sector - workshops, surveys, interviews and more. Educational institutions, companies and organisations and other stakeholders will also be involved in the project to help change awareness and create a framework for a more diverse workforce that promotes sustainable development, especially in rural areas. With these activities, we aim to increase the proportion of young women in the forestry sector, for which communication and involvement of the target groups from the beginning of the project are crucial.

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Fem2forests

KEYNOTE SPEECH

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Rooted in Diversity: Women Changing and Shaping the Future of Science (and Forestry)

Zarja Muršič¹

¹ Freelance Science Communicator, zarja.mursic@gmail.com

Keywords: *women in science, diversity*

Extended summary

Science is commonly seen as a purely objective pursuit to find answers to research questions. It should not be affected by any biases or preconceptions we might have of the world around us. In reality, it does not work like this. In my work as a science communicator, I use a quote from British science writer Ed Yong, who stresses the importance of diversity, equity, and inclusion in science reporting. Yong says: “Science is often caricatured as a purely empirical and objective pursuit. But in reality, a scientist’s interpretation of the world is influenced by the data she collects, which are influenced by the experiments she designs, which are influenced by the questions she thinks to ask, which are influenced by her identity, her values, her predecessors, and her imagination.”

Of the many fields in which women have made an impact, two are close to my heart. These are ornithology and primatology. In studies of bird songs, male birds received most of the attention. The common understanding of this behaviour was that males sing to attract females. In the last few decades, researchers started noticing that females also sing and started updating their understanding of bird song and its function. Studies in the last decade have shown that females sing in up to 70% of birds (Odom et al. 2014; Webb et al. 2016). Studies of female birds have been predominantly led by women researchers (Haines et al. 2020). Women in primatology changed our understanding of male-female sexual dynamics and female roles in primate societies. For example, early primatologists in the first half of the 20th century focused on male behaviours and explained their behaviours as hierarchy forming. When women researchers eventually entered primatology and observed primates in their natural environment for a longer time, they discovered that female primates also play an important role in group dynamics (Tang-Martinez 2020). These changes in the understanding of animal behaviour would not have happened if women would not have entered these fields.

We are currently living in a climate crisis and the field of climate change studies is still heavily represented by men researchers, especially in the IPCC (Intergovernmental Panel on Climate Change) reports. The current report was co-authored by 33% of women researchers.

Our understanding of the world around us improves if it is rooted in diversity, inclusion, and equity. Science and society suffer through missing out on the contribution and imagination of underrepresented minorities.

We need to corroborate we are good role models for the younger generations and encourage women to enter fields of science and work that are predominantly seen as male professions, such as forestry. We also need to make certain women's perspectives and solutions are heard and used. Not because women offer them but because they might be different to the current

solutions as well as more suitable for the current issues. Science and forestry are better shaped thanks to the imagination, values, identity and unique perspectives of women and underrepresented minorities.

References

Yong, E. 2020. *What Even Counts as Science Writing Anymore?* *The Atlantic*.

<https://www.theatlantic.com/science/archive/2021/10/how-pandemic-changed-science-writing/620271/>

Tandon, A. 2023. *IPCC authors has changed over three decades.* *Climate Brief*.

<https://www.carbonbrief.org/analysis-how-the-diversity-of-ipcc-authors-has-changed-over-three-decades/>

Odom, K.J., Hall, M.L., Riebel, K., Omland, K.E. and Langmore, N.E., 2014. *Female song is widespread and ancestral in songbirds.* *Nature communications*. 5, 1: 3379.

<https://doi.org/10.1038/ncomms4379>

Webb, W.H., Brunton, D.H., Aguirre, J.D., Thomas, D.B., Valcu, M. and Dale, J., 2016. *Female song occurs in songbirds with more elaborate female coloration and reduced sexual dichromatism.* *Frontiers in Ecology and Evolution*. 4, 22.

<https://doi.org/10.3389/fevo.2016.00022>

Tang-Martínez, Z. 2020. *The history and impact of women in animal behaviour and the ABS: a North American perspective.* *Animal Behaviour*. 164: 251-260.

<https://doi.org/10.1016/j.anbehav.2019.12.011>

Haines, C.D., Rose, E.M., Odom, K.J. and Omland, K.E., 2020. *The role of diversity in science: A case study of women advancing female birdsong research.* *Animal behaviour*. 168: 19-24.

<https://doi.org/10.1016/j.anbehav.2020.07.021>

SESSION 1: Workforce of tomorrow - a gender perspective

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Why not forestry? Comparative analysis of barriers and needs for inclusion of girls and young women in forestry

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Keywords: *girls, women, career in forestry, equal opportunities, inclusion*

Extended summary

Women have long been active in the forestry sector of the Danube Region, yet they continue to be underrepresented in leadership roles, even though many women own forests. Research from the Fem4Forest project shows a growing interest in forestry among women, marked by an increasing number of female graduates. This signals the potential for a more female-driven forestry sector in the future. However, the sector today faces challenges, such as labour shortages and declining interest in forestry professions in general. For women, these problems are compounded by persistent gender stereotypes and limited access to career opportunities, which continue to hinder their full participation in the sector.

The Fem2Forests initiative is tackling these issues head-on by creating innovative career pathways for girls, integrating gender perspectives into forestry education, and improving conditions for women's participation. Its goal is to significantly boost female representation in forestry by 2030. To understand the challenges women face, the project conducted extensive research across nine countries in the Danube Region, gathering input from target groups through surveys and roundtable discussions. This participatory approach captured a comprehensive view of women's experiences, challenges, and needs. Two sets of online questionnaires were designed: one for girls studying forestry and another for those outside the field, supplemented by roundtable discussions with key stakeholders. The findings reveal that personal interest in forestry plays the most significant role in career choices, though financial considerations and work-life balance also matter. Yet, the sector struggles with persistent gender stereotypes, misconceptions about the profession, and concerns about occupational safety and physical demands – barriers that are particularly challenging for women.

Widespread misconceptions about forestry persist globally. Students from non-forestry backgrounds often know little about the sector, and even those studying forestry feel inadequately informed about required skills and opportunities. Many view the field as offering limited prospects, heavy physical labour, and being unsuitable for women. These misconceptions deter potential candidates, especially women, from entering the field.

Female students face additional hurdles in their education and internships, including unequal treatment and gender biases. The male-dominated nature of the industry only magnifies these challenges, creating further barriers for women to thrive in forestry.

The demand for practical experience and mentorship is clear. Female students are calling for more hands-on fieldwork, internships, and programs led by successful women. Female role models are essential to inspire and guide these students through their education and careers. To support this, educational institutions must improve career guidance and provide more information on the diverse opportunities within forestry.

The research also highlighted best practices for career guidance, which will be explored further in the next phase of the project. Hands-on approaches – like fieldwork, job shadowing, and professional lessons – were shown to effectively engage young people in forestry. Other successful strategies include school open days, participation in reforestation projects, and using platforms like TikTok to reach a broader audience. Mentoring programs, meetings with forestry professionals, and career days at companies were also identified as impactful ways to raise awareness and interest in forestry careers.

Dismantling stereotypes and promoting equal opportunities are key to a more inclusive forestry sector. With the rising interest of women in forestry and targeted initiatives like Fem2Forests, the future of forestry in the Danube Region could be one where women not only participate but lead in sustainable forest management.

Acknowledgment: This summary is extracted from the report “Innovative pathways for efficient involvement of girls and young women in the forestry sector”, prepared by partner organisations of the Fem2forests project. The authors gratefully acknowledge receiving funding from the European Union [Danube Region Programme, DRP0200118 – Fem2forests].

References

- Hafner, P., Flajšman, K., Krajnc, N., Karničnik, M., Pavlič, T., Šumenjak, E., Goznik, T., Pezdevšek Malovrh, Š., Uhan, Z., Skiba, A. 2024, D.1.1.1 Barriers and needs for inclusion of girls and young women: joint report. Report. Ljubljana: Gozdarski inštitut Slovenije.
<https://dirros.openscience.si/lzpisGradiva.php?lang=slv&id=19759>
- Hafner, P., Stare, D., Karisch-Gierer, D., Pretterhofer, H., Zeist, K. Van, Janusch, E., Gaube, H., Böhling, K., Schreiber, R., Handlos, M. 2021. Report on current situation and position of women in forestry in Danube region: Forest in women's hands (Fem4Forest).
<https://dirros.openscience.si/lzpisGradiva.php?lang=slv&id=16218>



How a Massive Open Online Course ForGEDI can address students' motivations, hesitations, and obstacles in forestry-related sectors

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Keywords: *gender equality, diversity and inclusion; forestry education; future forestry workforce; transformational change; SDGs*

Extended summary

As the forestry sector undergoes rapid technological change, such as the adoption of remote sensing, data analytics, precision forestry techniques (Venanzi et al. 2023), and soft skills (Mayor et al. 2022), it is essential to build a workforce that is both technologically skilled and diverse in gender, ethnicity, and perspectives (Hanewinkel and Peyron 2014). This need for diversity is crucial not only for sustainable forest management, but also for fostering innovation and resilience in the sector. Thus, strategies must focus on attracting a diverse workforce to foster innovation (Ludvig et al. 2024) and resilience in forestry practices (Corona 2019).

Globally, forests support the livelihoods of over 1.5 billion people, yet the forest sector remains hazardous (ILO 2019, p.2) and predominantly dominated by men. A recent estimate (period: 2017-2019) revealed that at least 33 million people were employed in the forest sector worldwide (FAO 2022). Approximately 77% of the workforce is in the informal economy, often lacking social protections and safety standards (Lippe et al. 2022; Lippe et al. 2023). In Europe, women represent only 23% of students in higher forestry education and make up 3–32% of the workforce (UNECE and FAO 2020), occupying limited leadership roles (Böhling et al. 2021).

In 2014, a survey conducted by (Bal et al. 2020) found greater hesitancy of women and people of colour to enrol in forestry-related degree programs compared to their white man counterparts and the number of women undergraduate students is declining (based on US data of Bal et al. 2023). Testimonies from the IFSS Workshop held in 2023 exposed that female students are exposed to gender stereotyping, sexism, patriarchy, micro-aggressions and similar (Mack et al. 2023). Further on, the research from Canada shows that young professionals from minority backgrounds report challenges such as non-recognition of credentials, biased recruitment practices, discrimination due to physical characteristics and sexual harassment (Boakye-Danquah et al. 2023).

Triggered by the IFSA Open Letter in Gender and Forest Education (IFSA 2021), an international cohort developed the first Massive Open Online Course (MOOC) on Forest Gender Equality, Diversity, and Inclusion Forestry-related Sectors (ForGEDI) under the IUFRO Task Force on

Gender Equity and Forestry (ForGEDI MOOC 2024). Launched in April 2024, the course offers a comprehensive curriculum that combines theoretical insights, case studies on gender barriers, and practical tools in 12 learning hours structured in three weeks. Aimed at students, educators, businesses, and policymakers, ForGEDI provides open access to the latest GEDI research and best practices. Aligned with SDGs 4 (Quality Education), 5 (Gender Equality), and 10 (Reduced Inequalities), the course seeks to reduce educational gaps and foster diversity and inclusivity in forestry. With more than 1,400 enrolled participants in the first six months, the course's impact is already becoming evident: participants report a high level of satisfaction, with 97% of respondents stating they acquired new skills and knowledge, and 85% applying what they learned to their work environments (based on 87 responses).

In conclusion, ForGEDI MOOC underscores the need for gender-aware reforms in forestry education and policy, ensuring a more equitable and resilient workforce capable of meeting future challenges. The course represents a proactive response to the gender and diversity challenges in forestry. By mainstreaming GEDI principles and providing accessible education, it supports the development of a diverse, skilled workforce ready to address the sector's evolving environmental and technological demands. ForGEDI's mission to create inclusive learning environments and workplaces is a critical step towards ensuring a sustainable and equitable future in forestry for all.

Acknowledgement: The authors gratefully acknowledge the dedication of 40 persons involved in the development of ForGEDI MOOC materials and the support of their organisations. The authors are grateful for funding from SLU Global for the development of ForGEDI MOOC materials, Forest Stewardship Council International for ForGEDI MOOC promotion, as well as to the University of Padua, Digital and Multimedia Office for facilitating the access to FutureLearn platform and sponsorship of unlimited open access for a year. Lastly, the authors are thankful to IUFRO for being the umbrella organisation of the ForGEDI partnership.

References

Bal, T. L., Rouleau, M. D., Sharik, T. L., Wellstead, A. M. 2020. *Enrollment decision-making by students in forestry and related natural resource degree programs globally. International Forestry Review.* 22, 3: 287-305.

Bal, T.L., Sharik, T.L., Ziegler, P., Meeks, A., Jalil. D. 2023. *Update of enrollment trends in natural resources degree programs through Fall 2022. Society of American Foresters National Convention. Sacramento, CA Oct. 27, 2023.*

Boakye-Danquah, J., Reed, MG., Eguny, F., Machado, N., Addy, SNA., Wyatt, S. 2023. *A report on the experiences of underrepresented groups in Canada's Forest Sector: focus on opportunities, barriers, challenges & recommendations for action. Free to Grow in Forestry. July 2023.*

Böhling, K., Chobanova, R., Georgieva, D., Bouriaud, L., Krajnc, N., Schreiber, R., et al . 2021. *Report "Collected needs of women and wider gender perspectives in forestry" Deliverable: D.T1.1.2 Project number: DTP3-500-1.2 Fem4Forest.*
<https://doi.org/10.13140/RG.2.2.21884.05765>

Corona, P. 2019. *Global change and silvicultural research. Annals of Silvicultural Research, doi: 10.12899/ASR-1827*

Mack, V., Römer, N., Loch, T.K. 2023. *Workshop on Gender in Forest Education during the International Forestry Students' Symposium (IFSS) 2023*.

FAO. 2022. *The State of the World's Forests 2022. Forest pathways for green recovery and building inclusive, resilient and sustainable economies*. Rome, FAO.

<https://doi.org/10.4060/cb9360en>

ForGEDI MOOC. 2024. *Massive Open Online Course Gender Equality, Diversity & Inclusion in Forestry-related Sectors (ForGEDI)*. Provided by UNIPD, SLU, UdM, IUFRO, et. al. Available at <https://www.futurelearn.com/admin/courses/gender-equality-diversity-in-forestry-related-sectors>

Hanewinkel, M. Peyron JL. 2014. *Tackling climate change—the contribution of scientific knowledge in forestry*. *Annals of Forest Science*, doi: 10.1007/S13595-013-0352-2

IFSA. 2021. *Gender and Forest Education: An Open Letter by IFSA*. Available at <https://ifsa.net/gender-open-letter/>

ILO. 2019. *Decent work in forestry: Decent work in the rural economy: Policy guidance notes*. 12 pp.

Lippe, R.S., Schweinle, J., Cui, S., Gurbuzer, Y., Katajamäki, W., Villarreal-Fuentes, M., Walter, S. 2022. *Contribution of the forest sector to total employment in national economies: Estimating the number of people employed in the forest sector*. Rome and Geneva, FAO and ILO.

<https://doi.org/10.4060/cc2438en>

Lippe, R.S., Ojeda, L., T., Katajamäki, W., Schweinle, J. 2023. *Labour informality in forestry: A longitudinal (2009–2020) cross-country analysis of determinants in 70 developing countries*. *Forest Policy and Economics*. 156: 103056.

Ludvig, A., Öllerer, B., & Aubram, T. 2024. *Connecting gender balance, crisis resistance and innovativeness in the forestry sector: Women in leadership and management*. *Environmental Science & Policy*. 161: 103890. <https://doi.org/10.1016/j.envsci.2024.103890>

Mayor, L., Lindner, L.F., Knöbl, K.F., Ramalho, A., Berruto, R., Sanna F. et al. 2022. *Skill Needs for Sustainable Agri-Food and Forestry Sectors (I): Assessment through European and National Focus Groups*. *Sustainability*. 14, 15: 9607. <https://doi.org/10.3390/su14159607>

UNECE and FAO. 2020. *Forest sector workforce in the UNECE region: Overview of the social and economic trends with impact on the forest sector*. Geneva timber and forest discussion paper ECE/TIM/DP/76.

Venanzi, R., Latterini, F., Civitarese V., Picchio, R. 2023. *Recent Applications of Smart Technologies for Monitoring the Sustainability of Forest Operations*. *Forests*. 14, 7: 1503.

<https://doi.org/10.3390/f14071503>

SESSION 2: Education build on equality and diversity in forestry

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The future of women's employment in peripheral industrial regions

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Keywords: *gender equality, entrepreneurship, STEM, left-behind places*

Extended summary

Peripheral industrial regions represent a specific environment in terms of gender inequality. These areas are defined by a specific economic structure and occupational patterns, with women often classified as 'groups at risk of exclusion'. The economy in such regions has traditionally been concentrated in sectors such as mining, manufacturing and technology, which are predominantly male-dominated (Central European Service for Cross-border Initiatives 2019). These long-standing norms continue to shape limited labour markets and reinforce gender stereotypes – for example, men occupying high-skilled positions, while women are relegated to lower-skilled roles. In addition, employment support systems, such as education, training programmes and career planning, often perpetuate a culture of traditional industrial masculinity (European Commission 2023). In extreme cases, this leads to the systematic exclusion of women from the labour market, resulting in male-dominated workforces. As a result, women are often marginalised in local and regional labour markets, particularly in technology-driven industries. Women often find themselves in precarious employment with limited opportunities for career development within the region. This forces many to either commute to larger regional centres or emigrate altogether, contributing to a 'brain drain'. This exclusion not only undermines women's empowerment and well-being, but also reduces regional productivity and exacerbates the core-periphery divide.

The aim of this presentation is to examine the position of women in the labour market in the town of Trbovlje, a former mining and industrial town with around 14,000 inhabitants. Trbovlje is a town with a rich industrial and mining history, but today it faces many structural challenges: high unemployment, public health problems, low income, environmental degradation etc. (Bole et al. 2024). Women, and especially young girls, find it difficult to achieve adequate economic empowerment and fulfilment. We want to show the position of women in the labour market of Trbovlje in two ways. First, we collect and analyse official employment statistics showing structures and trends in different thematic areas (e.g. employment structure, entrepreneurship, wages, managerial positions). Second, we employ ethnographic research to explore women's narratives in Trbovlje to uncover past experiences of older generations and future orientations of girls and (young) women. The results will serve as a first step in identifying women's needs and institutional barriers to creating a more inclusive labour market in the town of Trbovlje.

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References

Bole, D., Goluža, M., Kozina, J. 2024. *Linking industrial culture with human agency: comparing development paths in three (post)industrial towns*. *Geoforum*. 150, 3: 103993. <https://doi.org/10.1016/j.geoforum.2024.103993>

Central European Service for Cross-border Initiatives. 2019. *Analysis of territorial challenges, needs and potentials of the Danube Region and strategic options in view of the Transnational cooperation for the period 2021-2027*. <https://budapest.cesci-net.eu/en/analysis-of-territorial-challenges-needs-and-potentials-of-the-danube-region-and-strategic-options-in-view-of-the-transnational-cooperation-for-the-period-2021-2027/>

European Commission. 2023. *Considering gender in regional transformations: A toolkit for just transition regions*. <https://doi.org/10.2776/569882>



Uneven ground: navigating gender and diversity in the forestry sector

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Keywords: *Gender inequality, Barriers, Underrepresentation, Workforce, Qualitative interviews, Austria*

Extended summary

Historically, forestry work was associated with “difficult conditions and the dangerous, dirty and heavy work [...], which were understood as being unsuitable for women” (Ringblom and Johansson 2020). While the sector has seen changes with the introduction of new technology and the demand for employees with higher education (Johansson et al. 2019), which could have acted as potential openings, the perception of forestry as “men's work” largely persists today. Holmgren and Arora-Jonsson (2015) attest “a gender biased corporatist culture” as actors in the sector form a homogenous group with regards to gender, ethnicity, age and educational background.

Structures within work organisations, in which forestry work is organised, reflect this long-standing view. Scholars like Acker (2006) argue that work organisations are not gender-neutral; preferably, they are shaped by deeply ingrained assumptions about gender (Acker 1990), forming what Acker refers to as *inequality regimes*, “defined as loosely interrelated practices, processes, actions, and meanings that result in and maintain class, gender, and racial inequalities within particular organizations” (Acker 2006).

A large part of the literature on gender aspects in forestry has been dedicated to the study of the Nordic forestry sectors, such as the Swedish forestry sector (e.g., Johansson et al. 2018; Johansson et al. 2020; Ville et al. 2023 etc.), while there is only limited research available on Austrian issues. This gap is significant not only due to the importance of forestry to Austria's economy, but also because the forestry sector, like in other national contexts, provides a compelling field to study from a gender perspective with its cultural and professional norms rooted in tradition and history, and gendered notions of men and masculinities (Johansson 2020).

The Austrian forest-based sector plays an important role for the Austrian economy, as it generates a gross value added of almost 20.4 billion euros, accounting for a share of roughly 5.7% of Austria's total economic output. It also secures 300,000 jobs in the forestry and timber value chain (Kleissner 2021), and its role as an employer in rural areas of Austria is often highlighted.

A recent UNECE report concludes that approximately 10% of the workforce in forestry are women, which is below the European average of around 14% (UNECE 2020). According to the most recent data for sustainable forest management, this trend has continued, with roughly 8% of female employees in the forestry workforce (Linser 2020).

These statistics highlight a stark gender imbalance within the workforce. Yet, understanding the gendered processes at play within in the sector requires moving beyond the numbers (Follo et al. 2017).

This presentation aims to do just that by highlighting selected findings from two series of qualitative, in-depth, semi-structured interviews conducted in the Austrian forestry sector. These

findings shed light on existing gender-specific barriers and the strategies women in leadership positions employ to overcome them, reflecting the broader gender dynamics and inequality regimes present within the sector (Öllerer 2022; Ludvig et al. 2024). Additionally, they illustrate the perceptions of gender equality and diversity in the workforce that are present among key representatives in management of work organisations and what measures these organisations take to address these issues (Öllerer et al. 2024).

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References

- Acker, J. 1990. *Hierarchies, jobs, bodies: A theory of gendered organizations*. *Gender & society*. 4, 2: 139-158.
- Acker, J. 2006. *Inequality regimes: Gender, class, and race in organizations*. *Gender & society*. 20, 4: 441-464, p. 443.
- Follo, G., Lidestav, G., Ludvig, A., Vilkryste, L., Hujala, T., Karppinen, H., Didolot, F., Mizaraite, D. 2017. *Gender in European forest ownership and management: Reflections on women as 'New forest owners'*. *Scandinavian Journal of Forest Research*. 32, 2: 174-184.
- Holmgren, S., Arora-Jonsson, S. 2015. *The Forest Kingdom – with what values for the world? Climate change and gender equality in a contested forest policy context*. *Scandinavian Journal of Forest Research*. 30, 3: 235-245, p. 238.
- Johansson, K., Andersson, E., Johansson, M., Lidestav, G. 2019. *The Discursive Resistance of Men to Gender-equality Interventions: Negotiating "Unjustness" and "Unnecessity" in Swedish Forestry*. *Men and Masculinities*. 22, 2: 177-196.
- Johansson, K., Andersson, E., Johansson, M., & Lidestav, G. 2020. *Conditioned openings and restraints: The meaning-making of women professionals breaking into the male-dominated sector of forestry*. *Gender, Work, and Organization*. 27, 6: 927-943.
- Johansson, M., Johansson, K., & Andersson, E. 2018. *Metoo in the Swedish forest sector: Testimonies from harassed women on sexualised forms of male control*. *Scandinavian Journal of Forest Research*. 33, 5: 419-425.
- Johansson, M. 2020. *Business as usual? Doing gender equality in Swedish forestry work organizations*. *Doctoral Thesis, Luleå University of Technology*.
- Kleissner, A. 2021. *Bedeutung der Forst- und Holzwirtschaft für Österreichs Wirtschaft [Press conference, Economica Institut für Wirtschaftsforschung]*, 16 March 2021.
- Linser, S. 2020. *Indikatoren für nachhaltige Waldbewirtschaftung des Österreichischen Walddialoges. [Report]*, p. 177.
- Ludvig, A., Öllerer, B., Aubram, T. 2024. *Connecting gender balance, crisis resistance and innovativeness in the forestry sector: Women in leadership and management*. *Environmental Science & Policy*. 161: 103890.

Öllerer, B. 2022. *Gender-specific barriers in forestry: How do Austrian female leaders perceive barriers and what are their strategies to overcome them?* [Master Thesis]. Universität für Bodenkultur Wien.

Öllerer, B., Andersson, E., Johansson, M., Ludvig, A. 2024. *Navigating societal transformations. Insights from work organisations in the Austrian forestry sector.* [Poster presentation at the IUFRO World Congress, Stockholm], June 2024.

Ringblom, L., Johansson, M. 2020. *Who needs to be “more equal” and why? Doing gender equality in male-dominated industries.* *Equality, Diversity and Inclusion: An International Journal*. 39, 4: 337–353, p. 340.

UNECE. 2020. *Forest sector workforce in the UNECE region. Overview of the social and economic trends with impact on the forest sector.* [Report], p. 13. Available online at: <https://unece.org/DAM/timber/publications/2020/DP-76.pdf>,

Ville, A., Wong, G., Jiménez Aceituno, A., Downing, A., Karambiri, M., Brockhaus, M. 2023. *What is the ‘problem’ of gender inequality represented to be in the Swedish forest sector?* *Environmental Science & Policy*. 140: 46-55.



The FOPER project as a driver of the regional network in research and education in forest policy and economics

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Keywords: *FOPER, forest policy and economics, gender issues*

Extended summary

International Master Program in Forest Policy and Economics was implemented within the project "Strengthening Capacities of Education and Training for Forest Policy and Economics Development in the Western Balkan Region – FOPER" and realized at the Universities of Sarajevo and Belgrade in the 2007-2012 period.

The overall objective of the FOPER Master program was to enable the forest sectors of the Southeast European countries, to make an increased contribution to national economies, reduction of poverty and inequalities, environmental sustainability and cultural development. For this, the establishment of long-term and sustainable capacities for forest policy and economics research and education was crucial. FOPER was financed by the Government of Finland, Ministry for Foreign Affairs and implemented by the European Forest Institute in collaboration with the faculties of forestry and forest research institutes in Albania, Macedonia, Serbia, Montenegro, Bosnia-Herzegovina and Croatia. In addition to being the first regional joint educational program in the field of forestry in English, and having a number of novelties (block system and twining teaching, soft tutoring, internship programs, integration of research and education, etc.), this program was recognized as a tool for educating students, young leaders and professionals for forestry and environmental sector, capable to deal with various forest policy and economics issues.

This paper presents the achievements of women who were involved in the FOPER Master program, as students, teachers and researchers. Many of them have made enviable professional careers in their countries and internationally, working for universities, international agencies, consultancy, public administration and the non-governmental sector. The knowledge and skills they acquired from the FOPER Master program enabled them to become leaders in the fields of forestry policy and economics, nature protection, and sustainable development in their institutions. It can be argued that this education program was the starting point for truly unique networks of women engaged in research and management of natural resources, and thus contribute significantly to gender equality in forestry and management of natural resources.

SESSION 3: Changing the image of forestry by inclusion of women

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Rooted inequalities in Forest Education. Insights from a students' perspective

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Keywords: *Gender equality; Forest education; Student perspectives*

Extended summary

Gender inequalities, harassment, and sexism persist in forest education, where specific masculine or feminine traits are often assigned to roles, tasks, and professions. Although gender in forestry has gained attention in research and organizations, gender-aware forest education remains underappreciated. Outdated notions of gender, upheld by cis-heteropatriarchy, dominate education and research, excluding non-binary and other genders. Increased FINTA*¹ representation in forestry and an intersectional approach to discrimination are crucial for the future of the sector and society.

The International Forestry Students' Association (IFSA), the largest international network of forestry students, is student-led and dedicated to enhancing its members' education. IFSA actively advocates for a more gender-aware learning environment in forestry. In 2021, IFSA published an open letter (IFSA 2021), highlighting the role of education in fostering gender equality in forestry, sparking conversations within and beyond the organization. These discussions, often unavailable within university settings, allowed students to share their experiences, particularly in gender-related challenges.

This presentation focuses on insights gathered from IFSA students through focus group discussions and workshops. Students consistently reported a lack of gender equality and diversity in forest curricula across various countries and regions. For example, a participant in a 2023 workshop shared: "I couldn't practice in chainsaw class because the (male) instructor felt that girls are slow in learning and sometimes they overreact, which will put the class in danger" (IFSA 2024). Such testimonies underscore the unequal opportunities faced by FINTA* in forestry education.

The key areas for achieving gender equality in forest education emerging throughout the discussion were:

1. **Mandatory Gender Equality Education** for all students, promoting awareness of gender dynamics and respectful behaviour.
2. **Inclusive Curricula and Opportunities**, ensuring that teaching materials and research reflect diverse genders and are accessible to all.

¹FINTA* is the abbreviation of Female, Inter-sex, Non-binary, Trans and A-gender. The * stands for all those who do not find themselves in any of the letters in the designation and are marginalized in the patriarchal society

3. **Gender-Specific Safer Spaces**, offering female-only environments for students to share experiences without judgment.
4. **Mentorship Programs** with trustworthy senior members to provide guidance and support.

In summary, while students across the world experience unique challenges, common themes include the need for education on gender discrimination, safer spaces, and access to trustworthy mentors. IFSA's work, including informal exchanges and guided discussions within its Gender Sub-Commission, continues to provide an inclusive platform for students to address these issues. Additionally, the Sub-Commission was engaged in the development of a Massive Open Online Course (MOOC) centred on Gender Equality and Diversity in forest-related sectors. This effort underscores IFSA's advocacy for crucial reforms in forest education to address gender and diversity concerns effectively and contributes to closing existing gaps.

References

IFSA. 2021. Gender and Forest Education: An Open Letter by IFSA. Available online at: <https://ifsa.net/gender-open-letter/> [last access: 7 October 2024]

IFSA. 2024. Rooted Inequalities in Forest Education. Insights from a students' perspective. Presentation at the IUFRO World Congress, Stockholm. June 2024.



Beyond Stereotypes: The Evolving Role of Women in Forestry

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Keywords: *women workforce in forestry, male-dominant fields, gender equality paradox in STEM, gender differences, gender pay gap*

Extended summary

The presentation offers a personal perspective on the evolving role of women in traditionally male-dominated fields, with a specific focus on forestry. Drawing on both personal experience and statistical data, the speaker highlights the increasing presence of women in the forestry workforce. In Slovenia, approximately 41% of forest owners are women, and more than half of students in agriculture, forestry, fisheries, and veterinary studies are female.

Despite this progress, challenges persist. The presentation tackles the enduring stereotypes about women in forestry. The speaker raises thought-provoking questions about the origins of these stereotypes and whether society should explore their potential relevance.

Gender-specific challenges, such as safety and the physical demands of forestry work, are also addressed. Humorous photographs illustrate these challenges, exposing the speaker in an attempt to cut down a small, electrified garden tree. The presentation also includes data from the U.S. Bureau of Labor Statistics, showing that logging workers face the highest number of work-related injuries and fatalities, highlighting the hazardous nature of the sector. The speaker then poses a critical question to the audience: Is the notion of protecting women due to their reproductive roles still necessary in modern society?

The discussion shifts to acknowledging the wide range of forestry tasks that are not dependent on physical strength, making them equally accessible to both genders. As climate change reshapes the industry, the need for diverse forestry work is expected to grow significantly.

Another important topic is the broader societal context, particularly the gender equality paradox in STEM (Science, Technology, Engineering, and Mathematics) education. The speaker draws on research showing that women in more gender-equal societies are less likely to pursue STEM careers, often excelling in and preferring the humanities. This paradox raises important questions about how to support women's participation in both forestry and STEM fields in the best possible way. Data from the Slovenian Statistical Office for the 2021/2022 academic year supports this paradox, illustrating similar trends in tertiary education by field and gender.

The talk concludes with a reflection on the future of women's workforce participation, emphasizing the need to create equal opportunities while respecting gender differences. Despite progress, women still earn less than their male counterparts for the same work. The speaker advocates for a societal approach that not only supports women in forestry and other sectors but also recognizes the value of unpaid work, such as childcare, hence responsibilities that often fall disproportionately on women.

References

- Fem4Forest. 2021. *Dejstva in številke o ženskah v gozdarstvu v Sloveniji*. Available online at: https://www.gozdis.si/f/docs/projekti/Fem4Forest_Brosura-Dejstva-in-stevilke-o-zenskah-v-gozdarstvu-v-Sloveniji.pdf
- Hafner, P., Flajšman, K., Krajnc, N., Karničnik, M., Pavlič, T., Šumenjak, E., Goznik, T., Pezdevšek Malovrh, Š., Uhan, Z., Skiba, A. 2024. *D.1.1.1 Barriers and needs for inclusion of girls and young women: joint report*. Report. Ljubljana: Gozdarski inštitut Slovenije.
- Klanjšek, U. 2021. *Student Enrolment in Tertiary Education, Slovenia, Academic Year 2020/2021*. Statistical Office of the Republic of Slovenia. Available online at: <https://www.stat.si/StatWeb/en/News/Index/9537>
- Ministrstvo za kmetijstvo, gozdarstvo in prehrano. 2024. *Naj bo delo v gozdu varno in učinkovito!* Available online at: <https://www.gov.si/novice/2024-05-13-naj-bo-delo-v-gozdu-varno-in-ucinkovito>
- Roksandić, M., Poje, A. 2013. *Enako plačilo za enako delo in plačna vrzel med spoloma*. Zveza svobodnih sindikatov Slovenije. Ljubljana. Available online at: https://www.zsss.si/wp-content/uploads/2017/01/Studija_EnakoPlaciloZaEnakoDelo.pdf
- Stoet, G., Geary, D. 2018. *The Gender-Equality Paradox in Science, Technology, Engineering, and Mathematics Education*. *Psychological Science*. 29, 4. <https://doi.org/10.1177/0956797617741719>
- U.S. Bureau of Labor Statistics. 2022. *Civilian occupations with high fatal work injury rates*. Available online at: <https://www.bls.gov/charts/census-of-fatal-occupational-injuries/civilian-occupations-with-high-fatal-work-injury-rates.htm>



EMBOSCADES. Dones i bosc (Women of the Forest): Creating new spaces and values through women perspectives in the forestry sector in Catalonia

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Keywords: *women, forestry gender, sustainability, forest management, role models, visibility, women forestry role models*

Extended summary

“Emboscades. Dones i bosc” “Women of the Forest” is an exhibition set up by the Government of the Generalitat of Catalonia.

The exhibition invites you to explore and delve into the role of women in forestry in Catalonia, as well as the importance of managing and conserving forests – all through the eyes of 18 women who, day by day, with their work, make it possible.

Women have a key role in forest management because they do work in the sector. Their efforts, however, are not usually seen or appreciated. Women can provide a way of working that emphasizes aspects that until now have not been taken into account, other than traditional ones and breaking generally masculinized stereotypes of the profession, such as manipulating heavy forestry machinery, currently technified, coordinating field work, piloting or acting and leading forest emergency actions.

Therefore, we must make their work visible, claim it, celebrate it and denounce all the barriers that still exist. The forest sector has a glass ceiling that needs to be overcome.

Only a forestry world, based on equality between women and men, will be able to achieve the challenges that the future poses to us.

Below are some data on the representation of women in the forestry sector in Catalonia:

- In Catalonia, forestry is an important issue. 64% of Catalonia is forest, and of this forest area, 75% is privately owned, while 25% is public. According to data from the year 2020,

of the total number of forest owners, 32% are women and, in co-ownership, this percentage reaches 45%. (Data from the Forest Ownership Center, 2020).

- Few women work in forestry, specifically 374 out of a total of 3,897 people working in forestry in Catalonia. Only around 7% of machine operators, forestry and hunting workers as well as wood treatment workers are women. In jobs more closely linked to engineering, female representation increases and reaches approximately 48%. (Data from Idescat and the Observatory of work and productive model, 2022).
- In forestry research job positions, approximately 50% are women. However, among the senior job categories in this profession there are only 25% women occupying these higher forestry job categories. In terms of publications, only 32% of scientific articles have been written/signed by women (this corresponds to 2-3 articles published on average by women, compared to 6-7 articles published by men). (Data from the CREAM and CTFC Equality Plan, 2020).

Forest management and most professions associated with the rural environment are vastly unknown to people in the urban world, despite being essential. The environmental, economic and social challenges are immense and natural systems are the most affected, but this is also where the search for solutions must be focused on. Understanding this is key to valuing our forests and approaching them in a different way.

During the exhibition venue at the Palau Robert in Barcelona March - April 2024, the exhibition was seen by many visitors. Various side activities were organized and open to the public such as a series of lectures on International World Forest Day, a reunion of more than 100 women forest landowners, viewing of the 18 interviews including discussions with the director of the Catalan Women's Institute on the role of women in the forestry sector, as well as various activities for families and children. It is now available as a travelling exhibition

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- CTFC - Forest, Science and Technology Center of Catalonia
- CPF - Forest Land Ownership Center
- CREAM - Ecological Research Center and Forestry Applications
- Forestal Catalana, S.A. - Catalan Forestry Public enterprise

References

1st Gender diagnosis of the forestry, fire prevention, hunting and continental fishing sectors. 2022. Government of the Generalitat of Catalonia.

SESSION 4: Networking of women as a key of change in forestry

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German Women in Forestry association: a success story

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Keywords: *women in forestry, association, history, past, survey, education, equity*

Extended summary

The German association “Frauen im Forstbereich e.V.” was founded in 1993 by forestry students in Göttingen, Lower Saxony. Its aim is to support gender equity, collaboration of women in forestry, education and studies about women in forestry and to improve women’s situation in family, at work and in society. Currently, there are about 170 members.

In Germany, women were allowed to study forestry during the Second World War to fill the programs and to replace the missing men. However, it was not until the 1970s that women fought to be allowed to work in the forestry administrations without military service, which was still indirectly exclusion for women. This has led to an increasing number of female students in Germany’s university forestry programs.

In 1986, around 30 to 40 female forestry students started meeting regularly in Göttingen and going on annual fieldtrips throughout Germany. The Göttingen network of female foresters initiated the now 31 years old association. In 2000, the “Frauen im Forstbereich” (Women in forestry) association convened their first international meeting.

At the turn of the century, reforms in forestry administrations began, which led to a hiring freeze. It was only till the late 2010s that retirements made new recruitments possible. Since about 1/3 of students were women, the share of women in the workforce increased as well. This has led to two generations of female foresters in the association, now working closely together and learning from each other. Apparently, some things had not changed in the last decades, like discussions on the compatibility of work and family or how to deal with sexist comments. Some examples: “Many more women should study, then men’s career opportunities will increase.” (1988), “Why aren’t you wearing a skirt? It would be much easier to look under it.” (2020), “You should just impregnate the women away” (1988 and 2022), “girl”, “sweetheart”.

In 2022, about 13% of the trained foresters in the state forest administrations were women, yet the share of female forest workers is far lower (4%). Compared to that, 34% of Bachelor students and 11% of forest worker trainees were women. Also, the number of women in leadership positions remains lower (Hintze, 2023). Women are still often encouraged to preferably work in research, education, forest inventory, or to assist instead of leading a forest district and rather not working with machines or road construction. Also, care work is still often seen as a women’s topic.

For the future, we would like to see mentoring for young women and female leaders, women's meetings, awareness trainings for male managers as well as parental leave and part-time work as the general norm for both women and men.

References

Hehn, M., Katz, C., Mayer, M., Westermayerm, T. 2010. *Abschied vom grünen Rock*. oekom verlag; 1. Edition, München.

Hintze, V. 2023. *Frauen im Forstbereich II – Deutschlandweite Datenerhebung zum Geschlechterverhältnis und zur Gleichstellung der Mitarbeitenden der Landesforsten*. Bachelor's Thesis. HNE Eberswalde.

Lewark, S. 2003. „Kulturfrauen“ und „Maschinenführer“ – von der Arbeitsteilung in der Forstwirtschaft. *Freiburger FrauenStudien 13. Dimensionen von Gender Studies, Band II. 9, 2*. Available online at: <https://elibrary.utb.de/doi/pdf/10.3224/fzg.v9i2.12>

Meier, A. 2017. *Frauen im Forstbereich – Geschlechterverhältnisse und Gleichstellung in einem männerdominierten Arbeitsfeld*. Bachelor's Thesis. HNE Eberswalde.

Project wa'gen. 2010. *Waldwissen und Gender – das Blog zum "Abschied vom grünen Rock"*. Available online at: www.wa-gen.de

Riedl, Ursula. Baden-Württemberg. Personal resource.

Statute Frauen im Forstbereich e.V. 2014. *Terre des Femmes - Menschenrechte für die Frau e.V.* Available online at: <https://forstfrauen.de/der-verein/satzung/>



We can - a campaign of women foresters in Mongolia

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Extended summary

The role of women in Mongolia's forestry and environmental sector is undergoing a significant transformation, marked by both challenges and emerging opportunities. Currently, the gender ratio at the basic and medium levels is nearly balanced at 1:1; however, at upper-level decision-making positions, the disparity is stark, with a ratio of 1:9 in favour of men. Until 2023, there had been no active campaigns focused on women's involvement in forestry. This changed with the launch of a campaign for women foresters on November 2, 2023, supported by the Embassy of Slovenia in Beijing and the Slovenian Forest Institute. The initiative aims to enhance skills, foster collaboration, and build partnerships among women in forestry.

The campaign “Changing the image of forestry” has initiated the networking activities amongst women foresters in Mongolia, and has organized several capacity building trainings in the rural areas, and the capital city of Ulaanbaatar. Over 370 participants attended training sessions across various aimags, with an overwhelming majority (98%) being women actively employed in the sector. The age distribution of participants indicates that 50% are aged 31-45 years, 31% are aged 46-60 years, 9% are over 60 years, and 11% are aged 21-30 years. Employment data reveals that 43% work in governmental organizations, 25% hold executive positions in companies, while 11% are employed in private entities and 8% are affiliated with NGOs.

Survey results from the training seminars indicate that 78% of respondents have worked in the forest sector for up to 15 years. Income levels among participants show that 46% earn between 1-2 million MNT (3380 MNT= 1 USD) monthly, while 40% earn less than 1 million MNT. Only a small fraction (4%) earn more than 3 million MNT. Key challenges identified include low engagement and income (32%), insufficient partnerships and collaboration (22%), deficient knowledge transfer regarding technology and innovation (10%), weak capacity building (10%), and a lack of training opportunities to enhance capabilities.

Despite these challenges, there is a strong aspiration among women in the forestry sector to formulate gender policies; approximately 83% expressed interest in developing such initiatives. The “Forest, Sustainability, Women's association has conducted eight active training seminars over the past ten months, emphasizing knowledge sharing and partnership development at local, regional, and international levels.

In conclusion, while progress has been made in recognizing the importance of women's roles in Mongolia's forestry sector, significant gaps remain. Initiatives aimed at enhancing women's participation and influence are crucial for sustainable forest management. Continued focus on gender equity will be essential for addressing existing challenges and ensuring the future sustainability of forests in Mongolia.

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WOFO – Opening the umbrella

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Extended summary

The Fem4Forests project revealed how women themselves consider networks to be important for their work in forestry. The international network WOFO – Women in Forestry International is one of the lasting results of this project. WOFO was registered by founders from six countries: Austria, Germany, Iceland, Poland, Slovenia and Ukraine.

Networks for women in forestry offer support and opportunities for further development for their individual members and, at the same time, send a strong signal to the outside world: they make women visible and give them additional voice and weight.

WOFO connects existing networks of women in forestry to support the creation of new networks and initiatives as well as to make them more influential and integrated at the national and international levels.

The aim of WOFO is to:

- build and support international relationships among women and women's networks in the forestry sector;
- offer and exchange expertise, information and ideas;
- make women in the forestry industry visible and audible.

This is our contribution to empowering women, emphasising and utilising their skills and thus making the forestry industry as a whole more resilient to future challenges.

To learn more about WOFO International, please visit [Facebook](#) and/or [LinkedIn](#)

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