What is the 'problem' of gender inequality represented to be in the Swedish forest sector?

Ville, Alizée; Wong, Grace; Aceituno, Amanda Jiménez; Downing, Andrea; Karambiri, Mawa; Brockhaus, Maria

Published in:
Environmental Science and Policy

DOI:
10.1016/j.envsci.2022.11.013

Publication date:
2023

Document Version
Publisher's PDF, also known as Version of record

Environmental Science and Policy 140 (2023) 46–55

Contents lists available at ScienceDirect

Environmental Science and Policy

journal homepage: www.elsevier.com/locate/envsci

What is the 'problem' of gender inequality represented to be in the Swedish forest sector?

Alizée Ville [a,*], Grace Wong [b,c], Amanda Jiménez Aceituno [c,d], Andrea Downing [c], Mawa Karambiri [a,e], Maria Brockhaus [a]

[a] University of Helsinki, Finland
[b] Research Institute for Humanity and Nature, Kyoto, Japan
[c] Stockholm Resilience Centre, Stockholm University, Stockholm, Sweden
[d] Leuphana University of Lüneburg, Lüneburg, Germany
[e] World Agroforestry Centre (ICRAF), Ouagadougou, Burkina Faso

ARTICLE INFO

Keywords:
Forest policy
Gender inequality
Rural development
Critical policy analysis
Sweden

ABSTRACT

Gender equality in natural resource management is a matter of sustainability and democracy for Sweden's government, however the country's forest remains a highly gender-segregated sector. We examine how gender inequality is problematized within Swedish forest and rural policy documents using the *What's the problem represented to be?* (WPR) approach. We build on previous efforts to investigate gender inequality in the forest sector by expanding the critical analysis to rural development policy. We conduct interviews with forest experts, owners, and practitioners to shed light on where there are gaps within the policy representations and uncover alternative policy options that are presented. Our findings corroborate that gender inequality is represented to be a technical problem, with policy measures aiming to increase the number of women within a forest sector that continues to maintain rigid conceptions about forestry production values. While there are claims of success in the increase of women within the sector in aggregate, there is little change in the numbers of women in decision-making positions. Forest policy relies upon women to bring growth and sustainability to the forest industry, while rural policy expects women to halt rural population decline. Our findings suggest that merely trying to fit more women into a mold that has been shaped for and by inflexible forestry and masculine values is an impediment not only to gender equality but also to the inclusion of other social groups and ideas in the changing rural landscapes of Sweden.

1. Introduction

In the 25 years since the Beijing Declaration, there has been a global increase in gender equality. Yet if progress were to follow current trends, it would still take women 257 years to close the gap in Economic Participation and Opportunity (WEF, 2019). Sweden is often presented as a forerunner in gender politics (Ingebritsen, 2006). It ranks 4th on the Global Gender Gap Index (WEF, 2019) which monitors the evolution of four key dimensions (economic participation, education, health and political empowerment). The Swedish government promotes itself as a 'feminist government', committed to building a society in which 'women and men shall have the same power to shape society and their own lives' (Government Offices of Sweden, 2019a, p.1). This is to be achieved through the attainment of six subgoals, with measures including gender-responsive budgeting, the creation of the Swedish Gender Equality Agency, feminist foreign policy, and gender mainstreaming throughout all fields of policy.

However, Sweden's gender proficiency has yet to trickle down into its forest sector - a sector featuring prominently in Sweden's climate strategy - which remains one of the most gender-segregated sectors in the country (Lidestav and Egan Sjölander, 2007; Torfgård et al., 2020). There seems to be no lack of political will: forest policy urges more women to 'become involved in forestry and contribute to a more equal forest sector' (SMA, 2007, p. 97); requires that 'women and men must have equal conditions, rights and opportunities to work in the forestry sector and be active forest owners' (Swedish Ministry of Enterprise and

* Corresponding author.
E-mail addresses: alizee.ville@helsinki.fi (A. Ville), grace.wong@chikyu.ac.jp (G. Wong), amanda.jimenez@su.se (A.J. Aceituno), andrea.downing@su.se (A. Downing), mawa.karambiri@helsinki.fi (M. Karambiri), maria.brockhaus@helsinki.fi (M. Brockhaus).

https://doi.org/10.1016/j.envsci.2022.11.013
Received 25 November 2021; Received in revised form 22 October 2022; Accepted 21 November 2022
Available online 2 December 2022

Innovation, 2011a, p. 5); and indicates that the forest industry 'needs a gender-equal forest sector' (Swedish Ministry of Enterprise and Innovation, 2011b, p. 6). However, previous studies demonstrate how certain dominant narratives can hijack gender equality progress (Andersson et al., 2018). For instance, Holmgren and Arora-Jonsson (2015) showed how framing climate change as a business opportunity may cast women in the narrow role of employees and forest owners catering to the needs of the forest industry, rather than as citizens actively involved in shaping forest goals. This is reflected in employment, where despite increasing female enrollment in higher forest education, women remain poorly represented in forest companies and top leadership positions (Johansson and Ringblom, 2017), due to gendered culture (Baublyte et al., 2019).

Sweden's forest sector is often promoted globally as the answer to sustainability and climate change mitigation, and this form of industrial production is gaining traction across many forest-rich countries. Referred to as the 'green gold' (Swedish Ministry of Enterprise and Innovation, 2018, p. 3), the forest sector is a policy arena full of many contested aspirations and unfolding storylines, ranging from biodiversity commitments made under the Convention on Biological Diversity (SMA, 2008), to rural employment goals and biomass production levels. While climate change mitigation is an explicit part of both forest and rural development policy, its implementation is translated into sustainable levels of biomass production linked to a thriving bioeconomy, or market-based certification mechanisms. Hence in forest policy, it is expected that: "Sustainable forest growth mitigates climate change through increased opportunities for the production of renewable raw materials for substitution and via the storage of carbon in forests and soil and in forest products." (Swedish Ministry of Enterprise and Innovation, 2018). While rural policy strategies state that: "Environmental awareness is high in Swedish forestry and Sweden has a very high proportion of environmentally certified forests in international terms" (SBA, 2019).

In this 'more of everything' model (Beland Lindahl et al., 2017), the flurry of ambitions makes it difficult to untangle what can be regarded as progress towards gender equality, and what are the indicators that should be applied. For instance, between 2009 and 2017, while the share of female forest owners increased from 38% to 39%, the proportion of women owning more than 50 ha of forests decreased from 35% to 28% (SFA, 2019). Meanwhile, the forest sector is also the subject of many contestations: discrimination has garnered much attention since the *#slutavverkat* movement emerged in 2017 (#clearfelled in English, the forest sector's equivalent of #MeToo), stirring the conversation about sexual harassment in forestry work and education, and sounding the alarm on widespread misogynistic behavior and deeply rooted power dynamics.

The investigation of these power dynamics underlying the forest sector's aims and ambitions is essential in understanding what drives the societal goals regarding the use of this 'green gold'. The Swedish government considers gender equality 'a matter of democracy and justice', and essential for 'growth and economic development' (Government Offices of Sweden, 2019a, p.1). It has also been argued that the bioeconomy debate could benefit from including a wider set of values such as tourism, hunting, and green products, in addition to timber production, possibly challenging structures of hegemonic masculinity and productive forestry (Lidestav et al., 2019).

However, despite a surge in gender-specific measures within forest policies in the past two decades (SMA, 2004, 2007; Swedish Ministry of Enterprise and Innovation, 2011a, 2011b), and an increase in the overall number of women in the forest sector, the Swedish Forest Agency notes that 'different conditions still prevail for women and men to enter the labor market, to remain and develop in working life' (SFA, 2019, p. 10). Women are expected to perform within this forest arena, yet it remains unclear what role women are expected to play and what role they are excluded from playing. We also aim to shed light on gaps and silences, because where meaning is produced through "what is said", meaning is also produced in "what is not said" (Rönnblom and Eduards, 2008). This calls into question how policy problematizes gender inequality in the forest sector and whether gaps and alternatives exist.

We investigate how gender inequality is problematized in forest and rural development policies. Many studies on gender in forest policy narrow their scope to forestry employment and production. As "natural resource management and rural development are interlinked" (Beland Lindahl, 2008, p.366), we add to this body of literature by looking at gender inequality through the double-layered lens of forest policy and rural development. We do this through critical policy analysis, using the 'What's the problem represented to be?' (WPR) approach (Bacchi, 2009).

2. Theoretical framework – What's the problem represented to be? (WPR)

Policies aim to solve problems, which they first strive to identify and frame, making problematization the work of governance (Bacchi, 2020). Hence policymakers are problem-solvers, but also problem-shapers (Bacchi, 2009, 2012). The study of these problems is important, as they define and legitimize how measures are implemented and resources are expended. For instance, framing the problem of gender disparity amongst senior board members as that of *female underrepresentation* will lead to a different attribution of responsibility and resources than that of *male over-representation,* which can implicitly shift the burden of change from women to the broader labor structure (Goodwin, 2012). Based on the constructivist premise that "modes of acting are contingent upon ways of knowing" (Bletsas and Beasley, 2012, p. 37), we scrutinize what is presented in policy as the issue to be tackled (i.e. the problem) and how this justifies the measures to be implemented (i.e. the solutions).

We apply Bacchi's (2009) poststructural approach "What's the problem represented to be?" (WPR) to examine how gender inequality is problematized in forest and rural development policy (Table 1). The WPR seeks to identify the narratives that support the framing of problems, both in what is expressed as problematic, and what is left out. The dominant representation of the gender inequality problem accrues power by being embedded in governmental policies and programs, and limits what can and cannot be talked about (Bacchi, 2012). As policy discourse is one of the many "forms of social knowledge that make it difficult to speak outside the terms of reference they establish for thinking about people and social relations" (Bacchi, 2009, p.35), we look at knowledge here not as something universal but as politically employed. The WPR also helps us expose the assumptions which legitimize policy measures and shed light on possible misrepresentations. As problem representations both create meaning and constrain thinking, we also pay particular attention to what is missing and silenced, paving the way for alternative representations and solutions.

Table 1
The WPR questions (Bacchi, 2009) adapted to Swedish forest and rural policy.

Question 1	What's the 'problem' represented to be in Swedish forest and rural policy?
Question 2	What assumptions or deep-seated presuppositions underlie this representation of the 'problem'?
Question 3	How has this representation of the 'problem' come about?
Question 4	What is left unproblematic in this problem representation? Where are the silences? Can the 'problem' be thought about differently?
Question 5	What effects are produced by this representation of the 'problem'?
Question 6	How and where has this representation of the 'problem' been produced, disseminated and defended? How could it be questioned, disrupted and replaced?

3. Materials and methods

3.1. Background

The Swedish forestry sector, whose main activities are centered on harvesting and silviculture, is said to be one of Sweden's most important basic industries (SMA, 2008, p. 27). Because of the forestry sector's role as an employer in the rural areas of Sweden - where 20–35% of people employed in industry work in the forestry and wood industries (SMA, 2008, p. 27) - scholars generally agree that "forestry is inherently a rural industry" (Laszlo Ambjörrnsson, 2021, p.9), and "forestry and rural areas in Sweden cannot be studied separately" (Keskitalo et al., 2017, p. 202). A more diverse forest sector is also believed to contribute to rural development (Umaerus et al., 2013). Therefore, though our main focus is forest policy, we also investigate rural policy to provide strong footing to our work. However, because forest policy has more recently emphasized practices of biodiversity conservation and leisure activities, our general area of study is hereby designated as the 'forest sector'.

We examine policy documents of three different policy actors: the Ministry of Enterprise and Innovation (*Näringsdepartementet*), responsible for issues concerning state-owned companies, business, innovation, rural areas, food and regional growth, the Swedish Forest Agency (*Skogsstyrelsen*), which is the national authority in charge of forest-related issues, and the Swedish Board of Agriculture (*Jordbruksverket*), which is the expert authority in the areas of agriculture, fishery and rural areas. Table 2 presents previous gender equality objectives which have been included in forest policies. Though we do not select these documents for analysis, they constitute the framing and genealogy of our main body of literature. Through this lens of forest and rural development policy, we understand the forest sector as a space of forestry work, but also of people and livelihoods in rural areas that are tied to forests in different ways beyond that of forest production.

3.2. Policy documents

We identified relevant policy documents following criteria of sector relevance (forest OR rural AND gender), publication date (most recent), scope (national strategies or programs), and policy actors (ministries and government agencies). Following these criteria, we selected a total of six documents (Table 3). Using a text analysis software (Nvivo), we inductively coded the documents, leading to the emergence of themes, distilled to deduce the problematization of gender inequality. The coding process was iterative, and stopped when no new themes emerged, pointing to the fact that the main problem representations had been identified (saturation principle). As discourse analysis requires the careful study of both text and context (Gasper and Apthorpe, 1996), we also examined past policies and literature (Table 2), tracing historical patterns and narratives that have allowed this particular problem representation to take shape and to assume dominance (Bacchi, 2009).

3.3. Interviews

We identified an initial sample of interviewees from the main forest actors, which we later extended through snowball sampling. We conducted semi-structured interviews with 18 forest experts, forest owners and practitioners (15 female, 3 male). These included people from academia (n = 6), government (n = 2), the private sector (n = 6), forest owners (n = 3) and members of female networks (n = 7), with several interviewees representing more than one group. The interview questionnaire, adapted from the WPR questions, enquired about gender inequality perceptions and considerations based on interviewee expertize and experience. The interviews were conducted through video-call, with a duration ranging from 40 min to 98 min. Audio recordings of interviews were transcribed and coded through an iterative process: three researchers collaborated to create a common codebook and used the codebook to respectively inductively code a sub-set of the interviews. The researchers then analyzed and categorized the codes to emerging themes in response to the WPR questions.

4. Results and discussion

4.1. What is the problem of gender inequality represented to be in the forest and rural sectors?

The selected forest policy documents (Table 3) set the explicit intention of increasing gender equality in the "forest sector" (*skogssektor*). However, a careful reading of the selected policy documents points to a focus on "forestry and the forest industry" (*skogsbruk och*

Table 2
Past gender-equality objectives in forest policy.

Policy actor	Policy document	Policy objectives	Gender objectives
Swedish Ministry of Agriculture(SMA)	Slow to advance… gender equality in the agricultural and forestry sector (2004)	Investigate the barriers to gender equality, which threatens local communities in sparsely populated areas. Propose measures to increase representation of women in the agricultural and forestry sectors, which are of vital importance for Sweden's prosperity and rural development.	[The lag in gender equality in the agriculture and forest sector] is a worrying trend, as the survival of local communities in sparsely populated areas is more dependent on the successful promotion of gender equality than that of their urban counterparts. (p. 9)
	A forest policy in line with the times (2007)	Declares equal weight to both the environmental goal and the production goal in forest management, as well as shared responsibility between society and forest owners based on a clearly defined and long-term ownership right.	Gender equality and integration need to be strengthened in the forest industry. (p. 26)
Ministry of Enterprise and Innovation (SME&I)	Competitiveness requires gender equality: a gender equality strategy for the forestry sector (2011)	"The government's goal is for Sweden to have a competitive business community throughout the country. To enable such a development of the forestry industry, recruitment of staff from the entire able-bodied population is needed. A part of the work with increased gender equality in the forestry industry is the development and implementation of this gender equality strategy." (p.3)	Women and men must have equal conditions, rights and opportunities to work in the forestry sector and be active forest owners. (p. 5)
	Forest Kingdom: with values for the world (2011)	Ensure sustainable use of forests, by increasing raw materials and protecting biodiversity. Increase production of raw materials through forest entrepreneurship and innovation. Increase visibility of the tourism industry, through better knowledge of forest heritage and access rights. Spread the Swedish forest model internationally by increasing exports and knowledge.	Sweden must provide equal opportunities for women, men and people of foreign backgrounds to work in the forest sector. (p. 6)

Table 3
Selected policy documents, relevant to gender equality in forest and rural policy.

Sector	Policy document	Policy actor	Policy objectives
Forest policy	Measures for an equal forest sector (2019)	Swedish Forest Agency (SFA)	Evaluate past strategies and propose new measures to achieve a gender-equal forest sector.
	Sweden's National Forest Program (2018a)	Ministry of Enterprise and Innovation (SME&I)	Establish a national strategy for new Swedish forest goals.
	Action Plan for Sweden's National Forest Program (2018c)		List the actions (assignments) required to implement the National Forest Program.
	Assignment to propose measures for an equal forest sector (2018d)		List the parameters for the gender assignment to be produced.
Rural development policy	A cohesive policy for Sweden's rural areas – for a Sweden that holds together (2018b)		Establish a national strategy for Sweden's rural development.
	Rural Development Programme - National (2019)	Swedish Board of Agriculture (SBA)	Foster the competitiveness of agriculture; ensure sustainable management of natural resources and climate-change measures; achieve a balanced territorial development of rural economies and communities.

skogsindustrin) (Swedish Ministry of Enterprise and Innovation, 2018, p. 7), thereby equating the Swedish forest sector with its productive industry. Forest policy justifies preserving and developing this multi-million euros industry (*mångmiljardindustri*, p. 41) on the grounds of Sweden's long history of industrial forestry, which remains even today the third largest exporter of paper, pulp and sawn timber in the world (Swedish Ministry of Enterprise and Innovation, 2018, p. 7), and its potential as a part of the transition toward the bioeconomy. Within this focus on the forest industry, gender equality is promoted in the context of a shortage of qualified workers, as "gender equality is strongly linked to the industry's need to secure both the supply of skills and competition" (SFA, 2019, p. 47). The focus on employment is further emphasized as policy states that "being able to recruit staff both today and in the future is one of the most common motives for the forest sector's efforts" (SFA, 2019, p. 26).

This focus on recruitment is translated in the quantitative indicators used to track progress. In forest policy (Appendix A), they show that "gender balance has improved in almost all surveyed indicators since 2011, albeit to varying degrees" (SFA, 2019, p.18). For example, in universities, from 2009 to 2018, there has been an increasing proportion of women in forest education. However, female representation in the private sector is at a standstill, where the shares of women in both manual forestry work (16% → 15%) and forest contracting (5% → 4%) have decreased slightly. In forest ownership, although the share of female owners has increased (38% → 39%) mostly due to the end of traditional patrilineal forest land inheritance (Lidestav, 2010; Laszlo Ambjörnsson, 2021), women own on average less surface area, as the number of women owning more than 50 ha has decreased (35% → 28%). The focus on statistics highlights the technical approaches of the gender strategies proposed by the forest policies. As one of our interviewees pointed out: "I think that very much comes down to the quantitative focus of gender equality or gender mainstreaming that has been implemented. [.] because it's a natural science sector, they are very much focused on those kinds of quantitative aspects – whether it's counting trees or counting bodies or people, it's sort of the same for them" (Interview 6, academia). Achieving gender equality is hence equated with increasing the number of women in the forestry workforce, as a means of fostering competition and growth in industrial forestry.

We find a similar framing in the examined rural policy documents, where a thriving forest sector is presented as a strategy to achieve rural development, through high growth and employment. Employment is a recurring issue, as policy reports that the workforce shortage experienced in the forest sector has a greater impact on rural areas than on urban areas, as "the forestry program is an important part of the work to achieve the goal of rural policy" (Swedish Ministry of Enterprise and Innovation, 2018, p.19). To achieve this goal, policy promotes "equivalent and equal conditions for women and men to work, reside and live in rural areas" by "contributing to creating an attractive living environment, which is a fundamental prerequisite for sustainable growth and development" (Swedish Ministry of Enterprise and Innovation, 2018, p. 23).

These framings highlight how both forest and rural policies problematize gender inequality as a technical problem of increasing the number of women in the forest sector. The belief that increasing the number of women will have positive ramifications for the forest industry's growth and rural development seems to be a recurring pattern within broader gender equality policy in Sweden. Gender measures have always been integrated into strategies of employment and growth, as the government reports that "the progress made towards gender equality has contributed to Sweden's high levels of employment and growth" (Government Offices of Sweden, 2019b). However, policy does not explain on how inflating the female workforce will lead to this desired growth and development, as it rests on the assumption that women will provide specific skills which will spontaneously benefit the sector. We break down this assumption in the following section.

4.2. What are the assumptions?

4.2.1. Gendered contributions to workplace dynamics and profitability

The selected forest policy documents assume that women will increase the forest sector's performance by improving workplace environments, and ultimately contributing to the sector's profitability and sustainability. For instance, policy highlights that women contribute to better work environments, as "[forest] inspectors usually appreciate it when women are involved because they ask a lot of questions and this also raises the quality for the men who participate" (SFA, 2019, p. 30). Women are assumed to "create more dynamic, pleasant, creative and thus profitable workplaces [.] which also leads to more profitable companies" (SFA, 2019, p. 47). Though it is not explicitly stated how more pleasant workplaces are meant to increase profitability, these nested assumptions demonstrate how women are expected to contribute to growth at different levels: either by contingency (congeniality) or necessity (growth), and always regardless of their own differences and interests. This assumption of profitability has been a recurring trend in forest policy, as a 2011 bill titled 'Competitiveness requires gender equality' stated that "an equal forest industry is also a more competitive forest industry" (Swedish Ministry of Enterprise and Innovation, 2011a, p. 3). Our interviewees concurred that there is a widely held expectation for women to improve workplace dynamics:

"they [the forest companies] argue that if we have more women, we'll have a nicer atmosphere. We'll have more diverse topics to kind of speak about in the lunchroom, or we'll have maybe a softer approach to some of our forest owners or customers. [.] women are expected to contribute with a nice atmosphere and friendliness and a bit softer attitudes" (Interview 2, academia).

"they think they'll solve gender inequalities by including more women, and then that will sort of solve everything because then they'll contribute to a better work environment. They'll sort of change the

sector through their participation or through their involvement, which I very much think is a drastic misconception" (Interview 6, academia).

Gender equality strategies are thereby intended to serve the needs of the forest industry, as women are expected to contribute to the forest industry's competitiveness and profitability (Johansson et al., 2019). Implementation of these policies risks essentializing differences, through reversal strategies (Squires, 2005), found to be present in most of the sector's forestry companies' gender equality action plans (GEAPs) (Andersson et al., 2018). Meanwhile, because of their unequal representation in the forest sector, women are presumed to lack interest in forest work. This justifies that forest policies place emphasis on "developing an action plan for how the forest industry will become more attractive for women to work in" (SFA, 2019, p. 14). This thinking contributes to a paradox whereby women are expected to increase the profitability of a sector for which they are perceived to be lacking interest (Fig. 1). Whether it be by increasing sustainability or workplace pleasantness, these strategies show that "men are outsourcing their responsibilities for the coming generations to women yet again" (Interview 8, private sector/female network).

At the center of this paradox, women walk a tightrope as their admittance to the forest sector is conditioned by their ability to strengthen existing structures, rather than transforming them. This is made clear in forest ownership: while ownership is currently close to being equally shared between women and men (39% women, SFA, 2019), female forest-landowners are said to "behave in ways that differ from the majority" (SFA, 2019, p. 27) - the majority here implicitly being Swedish males. Through "competence development and information dissemination" (SFA, 2019, p. 43), forest policy aims "to give women the same conditions to be active forest owners" (SFA, 2019, p.43), understood here as productive timber producers. Women are considered "non-traditional target groups" (SFA, 2019, p. 24), whose competences must be enhanced to satisfy the forest industry's rigid expectations and needs for increased biomass production. This is explained by the following assumption.

4.2.2. *The hegemonic belief of continued forest industry growth*

While forestry is estimated to contribute 1.4% to Sweden's GDP (World Bank, 2020), there is a widespread belief that industrial forestry is vitally important for Sweden's economy, partly due to the historical importance of forestry in Sweden's transformation into a rich industrialized country (Johansson, 1994; Beland Lindahl, 2008). The 1993

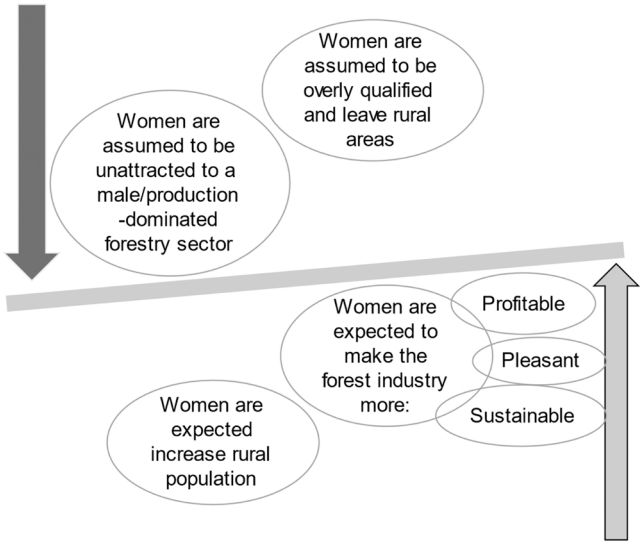

Fig. 1. Contradictory narratives: Women are expected to make the forestry sector more attractive and increase rural population, while this same lack of attractiveness is perceived as hindering their integration and participation.

Forestry Act stipulates that the goals of timber production and environmental conservation are to be granted equal importance. Yet the forest industry remains centered on objectives of production and growth.

This sustained wood production is one of the Swedish forestry model's conditions to "freedom with responsibility" (*frihet under ansvar*), which ensures autonomy and little government oversight in exchange for a sustained supply of wood. This can be understood in light of the independence and equality which (male) loggers first experienced out in the forest, in opposition to the constraining hierarchical structures of the village and unreliable payment one could obtain from agricultural work (Johansson, 1994, p.188).

However, female forest-owners are perceived as not complying with this agreement, as they are found to harvest less frequently than men (Lidestav and Ekström, 2000; Lidestav and Berg Lejon, 2013), leading women to be considered less "active" than their male counterparts (Holmgren and Arora-Jonsson, 2015; Follo et al., 2017). This in turn affects how gender inequality is framed within forest education, tailored as a reservoir of skills and labor from which the industry can draw. As a professor points out: "forest education is very interconnected with the industry itself [.] And I think it very much comes down to the influence that the sector has on our students" (Interview 6, academia).

In essence, the Swedish forestry model and the values of its industry remain unquestioned: Sweden is said to have a "sound forestry expertize" and must "spread knowledge about the Swedish model and sustainable forestry and thus contribute to increased poverty reduction and the fight against global warming" (Swedish Ministry of Enterprise and Innovation, 2011b, p. 10). Hence, women are expected to serve the needs of this well-functioning forest industry, and so must the gender equality strategies which support them.

4.3. *How has this representation of the "problem" come about?*

4.3.1. *The dominance of a masculine culture*

Industrial forestry historically co-evolved with values of masculinity, where young boys dreamed of becoming "tobacco-spitting, vagabonding lumberjacks" (Johansson, 1989, p. 209) in exchange for recognition and freedom. This prevails today, as "forestry education continues to be characterized by being traditionally masculine in both culture and tradition" (SFA, 2019, p. 39). This is due to the development of an all-male logging industry which shaped how Swedish masculinity in general was constructed since the export-oriented forestry sector bloomed in the late 19th century (Törnlund and Östlund, 2002). The scientific literature describes how forestry is rooted in masculine norms and traditions (Brandth and Haugen, 2005; Coutinho-Sledge, 2015; Johansson et al., 2019) in countries such as Canada (Dunk, 1991; Reed, 2003), Norway (Brandth and Haugen, 1998, 2000; Follo, 2002) and Sweden (Johansson, 1994; Andersson, 2012).

From then on, agriculture and forestry have been assumed to be dominated by a "masculine norm" (*maskulin princip*) in which women were historically perceived as transitive elements or "invisible peasants" (*osynliga bönderna*) (Flygare, 1999, p. 326), serving as transfer points between generations of men (Lidestav, 2010). The construction of this masculinity norm has affected perceived legitimacy and competence, as it casts a mold in which women are expected to fit if they wish to be admitted into the sector. Policy deplores that "previous studies and experience show that women are generally forced to prove their ability to be judged competent, while men are often automatically considered competent because they meet the expected norm of being a man in the forest" (SFA, 2019, p. 27).

The coalescence of the values of masculinity and industrial forestry was given an institutional platform in the Forest Institute, which merged in 1977 with the *Agricultural, Forestry and Veterinary University Colleges* and the *Veterinary School*, to become the Swedish University of Agricultural Sciences (SLU). Formal forest education was altogether inaccessible to women until 1969, when the first woman enrolled in forestry

education; until then, only those having completed military service were eligible (Johansson et al., 2019). Graduating from the SLU is a common denominator among people working in forestry, making the University a place where networks are created, and values are passed on. This makes the University a vector of homogeneity: "the sector doesn't particularly strike me as diverse. It's partly because they all come from the SLU. I mean, it's the one place in Sweden where they all study and they all have close networks to each other" (Interview 1, academia).

In order to be accepted, women must conform to this cultural homogeneity, which also includes a belonging to class and place (Ringblom and Johansson, 2020). For instance, "[it] is a sort of recurring trend that if you are a forestry student, you should like to hunt, you should hate predators, especially wolves" (Interview 16, academia). This conformity is reproduced at the highest levels of forest governance, as one interviewee recalled: "I remember in 2003 when Ulrica Messing [.] the Minister of Rurals Affairs, [.] she went to the SLU, and the first thing that she said in her speech to the whole university was like, oh, you know, I hunt and I was in the forest the other day. As if she were establishing her credentials to be able to speak about forestry" (Interview 1, academia). This dominance of masculinity in turn affects women's access to forest employment when they fail to embody the archetype of a forester: "A colleague who worked with young students told me that even the girls [.] say that, you know, they have a difficult time getting internships in these forestry companies because, you know, they like men who look like themselves" (Interview 1, academia). This culture coerces women to conform or be excluded.

4.3.2. *The fear of a dwindling rural sector*

The construction of a male norm in the forestry sector must also be understood in the light of rural depopulation concerns (Vail, 1996), which contribute to shaping rural policy. Indeed, the fear of a shrinking rural population is mentioned in policy as a "threat to rural development" (SBA, 2019, p. 53), leading policy to take measures to support a "stable or increased resident population or an improved age structure" (SMA, 2008, p. 218).

This observed rural exodus is believed to be accentuated by women, who tend to leave the countryside at a 3% higher rate than men (SBA, 2019, p. 30) to pursue higher education and skilled jobs (Swedish Ministry of Enterprise and Innovation, 2018, p. 11). However, this meager 3% rate seems insufficient to justify the growing number of rural strategies targeting women. On a closer look, it is often the identified lack of women engaging in entrepreneurship which is seen as an obstacle to a prosperous countryside, as: "Fewer women than men apply for support in the rural development program." (SBA, 2019, p.49). Indeed, over 2007–2012, only 16% of rural business grant applications were made by women (Wigren-Kristoferson, 2013).

Reporting on the lack of gender equality in rural industries, the government observes that: "Increased equality between women and men is a matter of fate for rural areas [.] Without increased equality, the countryside will die out" (SMA, 2004, p. 66). This dramatic language of life ("fate") and death ("dying out") accounts for the perceived severity of the population issue. Women are deemed a resource to be leveraged insomuch as: "Women are seen as a resource for sparsely populated areas that cannot be dispensed with" (SMA, 2004, p. 66). Hence policy perceives women as an essential component of rural development, aimed at "operations with a potential to promote growth, new jobs and to improve the competitiveness of the rural economy" (SMA, 2008, p. 218), rendering women as both the problem (when seeking higher education elsewhere) and the solution (when engaging in entrepreneurship) rural development, linking gender equality once more to industry needs. This is analogous to the situation found in the forestry and mining sectors, where women are "both the problem for (the lack of women) and the solution to (more women) gender equality" (Ringblom and Johansson, 2020, p.340).

4.4. *What is left unproblematic in this problem representation? Where are the silences, and can the problem be thought about differently?*

As we have argued, policy frames the problem of gender inequality as a numbers game, placing little focus on the power dynamics which have historically excluded women from taking an active role in managing the forest and deliberating on its use. For example, focusing on women to increase the sector's profitability masks the kind of employment or career for which women can aspire. In the corporate sector for instance, there are no indicators that track the trends of women in positions of leadership. This seems to constitute a disconnect between different policies: although power is the key to Sweden national-level framing of gender equality, led by the government's goal of "shared power for women to shape their own lives", questions of power disappear altogether in forest policy. This leaves unquestioned how underlying structures have shaped the industry, whom this benefits, how this power could shift, and what changes this could bring for the future of the forestry sector.

Some of these underlying structures have their origin in Sweden's history, in which the historical role of women in forests has been largely neglected by scholarship (Persson, 2011; Östlund et al., 2020). In pre-industrial Sweden, women shouldered most of the livestock grazing, collecting wood or foraging activities (Fiebranz, 2010), the "most significant part of the peasant economy" (Johansson, 1994, p.186), until rationalization and mechanization expanded forestry to an industrial scale from 1860s onwards (Ager, 2014), rendering it the livelihood of lumbermen. Hence, the forest as a male-dominated sector linked to timber production only emerged in the late 19th century (Arora-Jonsson, 2009). One of our interviewees pointed to this omission as contributing to rural and forest conceptions of masculinity:

"If we look at the history of forestry labor, women have also played a very crucial role, while if we look at the way history is presented today, they are very much ignored and marginalized. So I think that this kind of risk of reproducing the rural as something masculine is also a way of actually excluding women from the rural and the rural history" (Interview 6, academia).

By ignoring women's historical role in the forest, policy leaves unaddressed questions of power which underlie this "marginalization". The work toward gender equality is presented as a process of 'retrofitting' women in an industry in which has long ignored their previous contributions, rather than 'reintegrating' them in forest management processes in which they were historically active, and from which they should not have been excluded. In this way, policy avoids giving women power to shape the future of the forest, but rather aims to add them in a way that they will serve the goals of the existing industry, cognizant of the fact that "if women gain more power, men will lose power" (Interview 10, private sector/female network).

This is also translated in rural policy, in the form of female entrepreneurship, as the government claims that "Women's entrepreneurship is a strategic growth issue. A diversity of companies and entrepreneurs is important for the competitiveness of business, innovation and sustainability." (Swedish Ministry of Enterprise and Innovation, 2018, p.13). In this regard, the identified lack of women engaging in entrepreneurship is seen as an obstacle to a prosperous countryside: "Fewer women than men apply for support in the rural development program. Women more often apply for support for entrepreneurship outside the agricultural and forestry sectors." (SBA, 2019, p.49).

Moreover, the expectation that women will increase the industry's profitability only allows women to evolve within a narrow professional space. When given auxiliary roles (e.g., reviving the rural sector) and alternative goals (e.g., sustainability), women are excluded from expressing their own expectations for the forest – and in this way are rendered harmless, as they do not compete with the forestry sector. In this way, women "don't pose a threat […] women are not threatening the power structures when they work in nature conservation or in sustainability in this industry" (Interview 8, private sector/female

network). This conditioned entry to the forest sector impacts the formulation of gender equality policies.

4.5. What effects do representations of the 'problem' have on policy formulation?

Framed as a numbers game, gender equality measures are aimed at attracting a large pool of skilled workers into the forestry sector, as "the attractiveness of the sector is crucial for skilled labor, both women and men, to seek out the forest industries" (SFA, 2019, p. 41). This focus is translated into forest policy measures (Fig. 2), with Goal 1 aimed at increasing the attractiveness of forest education, and Goal 2 at increasing attractiveness in the private sector. As we've shown, successful gender equality strategies are assumed to contribute to the industry's profitability: *"The industry, they really want more women because they want to be an attractive employer and they often portray gender equality as a way to do good business"* (Interview 16, academia). A discursive effect of this problematization is often referred to as "the business case" (Johansson and Ringblom, 2017).

Promotion of this business case is carried out through recruitment. Equal rights and opportunities for women in Sweden have been historically promoted by including women in the production and consumer market, making gender equality tightly linked to the issue of access to the job market. As Arora-Jonsson (2009) points out: "Sweden's path to gender equality has been through the labor market, and women's presence in the labor force has been an accomplishment" (p. 217). However, *"The forest sector has really big problems, issues with recruiting women from the beginning, from education all the way up to working life"* (Interview 14a, government). This is why: *"The [forestry sector's] focus has been on recruiting more women and on how to do that"* (Interview 6, academia). However, many obstacles preclude women from thriving in the forestry sector, as has been shown in recent contestations, which we discuss in the following section.

4.6. How could this representation of the 'problem' be questioned, disrupted and replaced?

4.6.1. Forest education, an obstacle and a lever

The power/knowledge nexus is often produced and disseminated by scientific institutions associated with specific scientific disciplines (Winkel, 2012). In this way, the production of the legitimacy to work in forestry stems from traditional forest education institutions, among which the SLU was repeatedly mentioned by our interviewees. This is said to create a homogenous forest workforce sharing values and perceptions, and effectively "othering" anyone who fails to abide by these. The strong relationship between the forest industry and education renders the SLU both a potential obstacle and a lever for change. Indeed, "this strong sectorial spirit that the forest industry has is potentially a barrier for dealing with conflicts. And it's, at the same time, once we kind of reach the tipping point, it will be fast because then the whole industry will join at once, because it's how they do things. They can move together as a whole […]. Once change comes, it's going to change quickly" (Interview 2, academia). However, attempts to disrupt the status quo and bring about this change are likely to be met with resistance, as illustrated by the case below.

4.6.2. Disruptions and contestations

The *#slutavverkat* movement prompted a heightened awareness of the contestations against discrimination in the forestry sector. Studies show how widespread sexual harassment has led many women to withdraw from the forestry sector, after repeated misconduct from their male counterparts (Johansson et al., 2018), and policy has since acknowledged "that something is not working in our forestry universities" (SFA, 2019, p. 39). In our examined documents, forest policy outlines explicit measures against gendered discrimination and sexual harassment (Fig. 2), including clearer procedures against sexual harassment in schools (Measure 1), compulsory gender equality knowledge for students (Measure 5), gender-sensitive recruitment processes in forest companies (Measure 11), and research on the

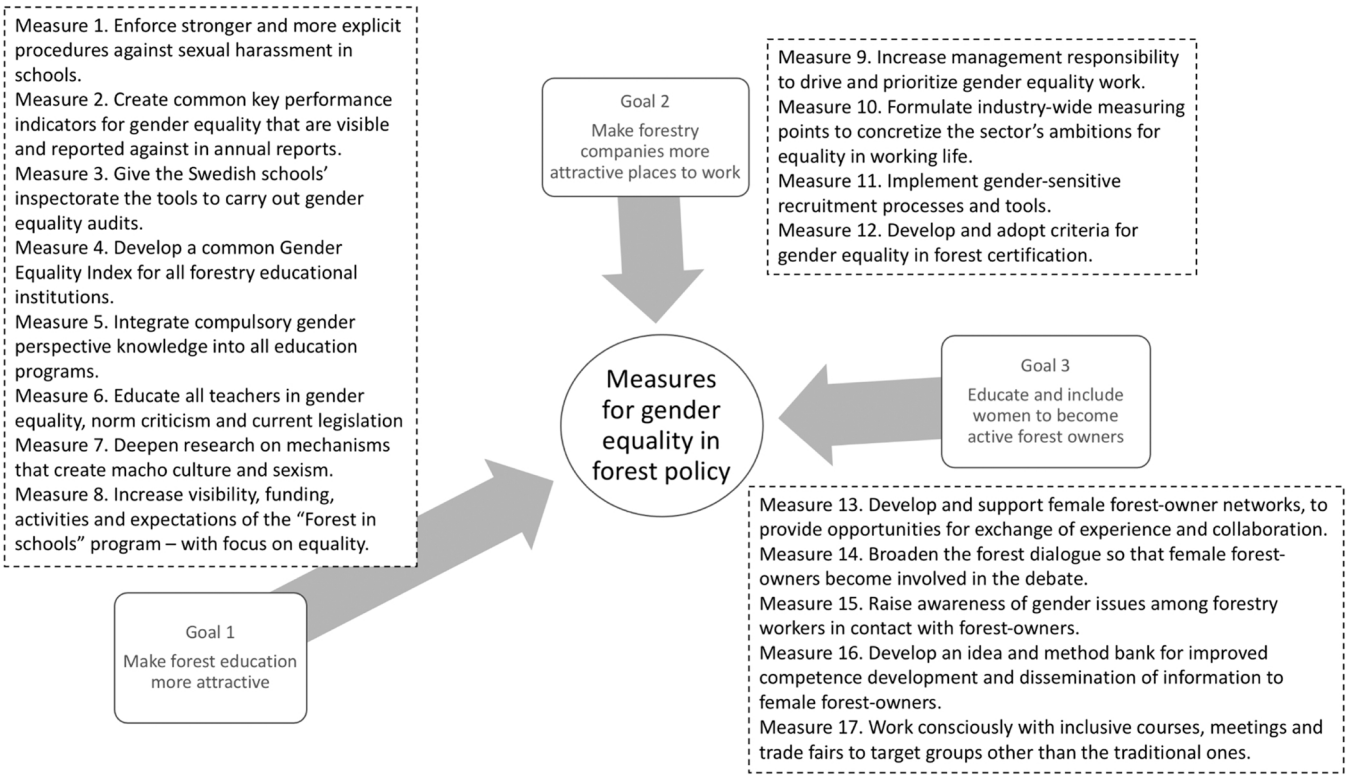

Fig. 2. Goals and measures related to gender equality in forest policy. Based on the report Measures for an equal forestry sector (SFA, 2019).

mechanisms that create macho culture and sexism (Measure 7). Yet women seeking to have conversations about the gendered obstacles encountered in the industry often find themselves confronted by apathy or hostility. An interviewee engaged in a professional female network explained how she received warnings from her own company after being vocal in media about gender issues: "They told me that I had to be a bit more silent" (Interview 8, private sector/female network). Though she considered her approach to have been respectful and constructive, she still faced backlash, because:

"I think the main problem is that they don't want to do the work. They just want to have the image, and we point out that the work hasn't been done, but they still want to make announcements about their fantastic work equality, so I think that's the main problem. [.] So I think we are disturbing them because their version of reality is threatened" (Interview 8, private sector/female network).

4.6.3. Don't disturb the men

Despite these contestations, policy continues to focus gender equality strategies solely on women: "I think, in all kinds of gender equality projects and work, it's also always, it's the woman who should do it. It's the traditional way" (Interview 17, forest owner/female network). This focus has favored educating women, as one of our interviewees explains: "Very often when the problem of gender equality or gender inequality arose, they said, oh we have to educate women, and we had to be educated in every sense. We had to be educated in the spirit to talk to others, we had to be educated in having the right color clothing so that we would look our best, in every sense" (Interview 15, forest owner/female network).

Across the examined forest policy documents, we find a systematic over-referencing of women compared to men: in the 2019 Swedish Forest Agency's strategy, "women" are mentioned nearly 10 times more frequently than "men". This is in line with the persistent trend that Swedish economist Stark (2007) terms "Don't disturb the men". When women are perceived as both the problem and the solution, they bear the brunt of the burden of change. This creates a situation whereby men are the 'silent norm' with whom women have to catch up (Debusscher, 2013).

5. Conclusion

Although Sweden is considered a forerunner in gender politics, the policy push towards gender equality remains driven by business necessities, where increased female participation in the forestry sector is perceived as more profitable and efficient, and in rural policy as vital for population growth and economic development. By using the WPR framework to investigate problem representations of gender inequality in Swedish forest and rural policy, we showed that gender inequality is problematized as a technical problem of recruitment - the solutions to which are aimed at increasing the number of women within a forestry sector that maintains rigid conceptions about forestry production values.

This constitutes a paradox between problem and solution: women are expected to contribute to the forest industry's growth and profitability, while being at the same time perceived as lacking the interest and legitimacy to be considered for forest work. These findings corroborate previous studies which have demonstrated that forest policy leans towards objectives of productive forestry at the expense of other forest uses (Andersson and Lidestav, 2015; Lidestav et al., 2019), in which gender equality is instrumentalized (Holmgren and Arora-Jonsson, 2015). This focus is to be expected, as "the selection and definition of problems always bear the social fingerprints of the dominant group in a culture" (Harding, 1986, p. 22).

We add to this research by placing the forest within a wider frame of rural development policies, in which a similar representation is found, pointing toward a systemic misrepresentation of gender inequality. This mechanical and quantitative problematization misrepresents the problem of inequality by leaving unaddressed questions of power, following a broader trend which "tends to emphasize women's participation without adequate attention to the many other ways that forestry is gendered" (Coutino-Sledge, 2015, p. 376). Indeed, our findings show that though current industrial forestry exhibits strong values of masculinity, broadening forest policy gender strategies' scope to encompass not only forestry but also other uses made of forest land (e.g., reindeer herding, berry picking) could promote policy's desire to include more women.

Further, the current representation of the problem risks essentializing female characteristics. Forest policy relies upon women to stimulate growth and increase climate change adaptation and mitigation. But while some female forest owners are found to be more interested in tourism and health/rehabilitation activities and climate change issues (Umaerus et al., 2019), gender does not seem to be a causal explanation for this difference in preference. As one of our interviewees mentioned: "I think women are more educated than men in general in Sweden, especially in the rural areas. And so they are more aware of the change that is going on in climate and how that might affect the forest." (Interview 5, Academia). And indeed, there is much evidence pointing to the fact that other women may have values more aligned with industrial forestry, through the performance of 'female masculinity', characterized by being 'though' and 'entrepreneurial' (Laszlo Ambjörnsson, 2021), by being 'hard working and nature-mastering' (Lidestav and Egan Sjölander, 2007, 2007).

This framing exposes gender inequality issues to political dilution (Subrahmanian, 2004; Johansson, 2020), rendering gender measures a technical box-ticking exercise: "Gender equality must be integrated into the management group's meeting agendas. Be involved in all operational work through checklists, guidelines, supplier assessments, etc" (SFA, 2019, p. 41). While linking gender equality to industry performance can create an incentive for companies to embrace equality measures, such an argument can blind stakeholders to the underlying structures which create inequality in the first place, potentially misguiding policies.

The measures designed to coax women into the forest sector for the benefit of the industry systematically place the burden of change on their shoulders, which risks impeding on any significant potential for global environmental change. This is an expectation that young women in forest education are contesting: "Female participants have quite frankly expressed that, okay, they don't want those kinds of expectations put on them when they're going out into the sector, that they should do this and that" (Interview 6, academia). Women have been increasingly vocal about their own expectations of the sector, as demonstrated by *#slutavverkat*. Disruptions like this movement may help shift current expectations.

Policy might benefit from broadening the gender equality discussion to masculinities. This may potentially increase "heterogeneity in the constructions and practices of masculinities and femininities related to forest ownership" (Bergstén et al., 2020). As gender equality is not a woman-specific issue, policy should engage men to the same degree as women (Connell, 2005; MacGregor, 2006). Much could be said about the 'ruthless self-exploitation' which men in forestry have subjected themselves to (Johansson, 1989, p.203). Raising questions about why men take strenuous and difficult jobs, why an all-male workplace is assumed to be difficult and hostile, and why men are perceived as lacking environmental awareness, could help address the sector's attractiveness problem in and of itself.

Challenging assumptions about gender equality, but also about the role of the forest sector, can initiate discussions about what society needs from the forest, and what the forest needs from society. Focus should then be put on the "kind of knowledge we have about the forests and what is important to do with forests. What kind of forests do we want? [.] And forestry needs to look at how it interacts within the rural areas in the local development initiatives and other things" (Interview 8, private sector/female network). The debate regarding the bioeconomy is

one such discussion but is too often based on a blinkered view of what the forest can "produce", equating the entire forest sector with the forest industry (Holmgren et al., 2022). This ignores the interests of other groups such as men who are "not compliant with the stereotypical masculine ideal in forestry" (Lidestav et al., 2019), as well as the Sápmi people or newcomers to Sweden. Allowing more diverse groups of people to enter the forest sector would require allowing the possibility of other forest uses to emerge, for e.g., non-wood forest products or forest protection services (Baublyte et al., 2019), opening new opportunities and ideas in the changing rural landscapes of Sweden.

CRediT authorship contribution statement

Alizée Ville: Investigation, Analysis, Writing – original draft, Visualization, Writing – review & editing. **Grace Wong**: Conceptualization, Methodology, Investigation, Writing – review & editing, Project coordination. **Amanda Jiménez Aceituno**: Conceptualization, Methodology, Investigation, Writing – review & editing. **Andrea Downing**: Conceptualization, Methodology, Writing – review & editing. **Mawa Karambiri:** Conceptualization, Writing – review & editing. **Maria Brockhaus**: Conceptualization, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data that has been used is confidential.

Acknowledgments

We would like to thank our informants for their time and insights, as well as the wider international SEQUAL project (Social-ecological relations and gender equality: Dynamics and processes for transformational change across scales) members. We also thank the two anonymous reviewers who provided valuable comments on this article. This research is funded by the Swedish Research Council (project number 2018-00988).

Appendix A. Supplementary material

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.envsci.2022.11.013.

References

Ager, B., 2014. Skogsarbetets humanisering och rationalisering från 1900 och framåt. Luleå tekniska universitet. http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A991290&dswid=8725.

Andersson, E., Johansson, M., Lidestav, G., Lindberg, M., 2018. Constituting gender and gender equality through policy. Equal. Divers. Incl. Int. J. 37 (8), 763–779. https://doi.org/10.1108/EDI-10-2017-0208.

Andersson, E., & Lidestav, G., 2015. Jämställdhet som branschgemensam strategi i skogsbrukssektorn [Gender Equality as a Joint Forestry Sector Strategy 2013–2015].

Arora-Jonsson, S., 2009. Discordant connections: discourses on gender and grassroots activism in two forest communities in India and Sweden. Signs J. Women Cult. Soc. 35 (1), 213–240. https://doi.org/10.1086/599259.

Bacchi, C., 2009. Analysing Policy: What's the Problem Represented to Be ? Pearson. ⟨https://books.google.com/books?id=9DniBAAAQBAJ&pgis=1⟩.

Bacchi, C., 2012. Why study problematizations? Making politics visible. Open J. Political Sci. 02 (01), 1–8. https://doi.org/10.4236/ojps.2012.21001.

Bacchi, C., 2020. Problem-solving as a governing knowledge: "skills"-testing in PISA and PIAAC. Open J. Political Sci. 10 (01), 82–105. https://doi.org/10.4236/ojps.2020.101007.

Baublyte, G., Korhonen, J., D'Amato, D., Toppinen, A., 2019. "Being one of the boys": perspectives from female forest industry leaders on gender diversity and the future of Nordic forest-based bioeconomy. Scand. J. For. Res. 34 (6), 521–528. https://doi.org/10.1080/02827581.2019.1598484.

Beland Lindahl, K., 2008. Frame Analysis, Place Perceptions and the Politics of Natural Resource Management: Exploring a Forest Policy Controversy in Sweden (Doctoral Thesis). Swedish University of Agricultural Sciences.

Beland Lindhal, K., et al., 2017. The Swedish forestry model: More of everything? Forest Policy and Economics. https://doi.org/10.1016/j.forpol.2015.10.012.

Bergstén, S., Andersson, E., Keskitalo, E.C.H., 2020. Same-same but different: gendering forest ownership in Sweden. For. Policy Econ. 115, 102162 https://doi.org/10.1016/j.forpol.2020.102162.

Bletsas, A., Beasley, C., 2012. Engaging with Carol Bacchi. In: Bletsas, A., Beasley, C. (Eds.), Coastal Management. University of Adelaide Press. https://doi.org/10.1017/9780987171856.

Brandth, B., et al., 1998. Breaking into a Masculine Discourse Women and Farm Forestry. Sociologia Ruralis. https://doi.org/10.1111/1467-9523.00087.

Brandth, B., et al., 2000. From lumberjack to business manager: masculinity in the Norwegian forestry press. Journal of Rural Studies. https://doi.org/10.1016/S0743-0167(00)00002-4.

Brandth, B., et al., 2005. Doing Rural Masculinity – From Logging to Outfield Tourism. Journal of Gender Studies. https://doi.org/10.1080/0958923042000331452.

Connell, R.W., 2005. Change among the gatekeepers: men, masculinities, and gender equality in the global arena. Signs J. Women Cult. Soc. 30 (3), 1801–1825. https://doi.org/10.1086/427525.

Coutinho-Sledge, P., 2015. Feminized Forestry: The Promises and Pitfalls of Change in a Masculine Organization. Gender, Work & Organization. https://doi.org/10.1111/gwao.12098.

Debusscher, P., 2013. Gender equality in European Union development policy: incorporating women's voices or confirming hierarchies? Afr. Focus 26 (2), 31–45. https://doi.org/10.21825/af.v26i2.4909.

Dunk, T., 1991. It's a working man's town: male working-class culture in Northwestern Ontario. McGill-Queen's University Press.

Fiebranz, R., 2010. Lagårdar och lönearbete. Modernisering och skillnadsskapande i norrländsk skogsbygd vid 1900-talets mitt [Farms and wages: modernization and differencing in the northernmost forest area in the middle of the 20th century]. Scandia 77 (1), 100–128. ⟨https://journals.lub.lu.se/scandia/issue/view/498⟩.

Flygare, I., 1999. Generation och kontinuitet: familjejordbruket i två svenska slättbygder under 1900-talet (Doctoral thesis). Uppsala: Sveriges lantbruksuniversitet. http://uu.diva-portal.org/smash/record.jsf?pid=diva2%3A63838&dswid=8357.

Follo, G., 2002. A hero's journey: young women among males in forestry education. Journal of Rural Studies. https://doi.org/10.1016/S0743-0167(02)00006-2.

Follo, G., Lidestav, G., Ludvig, A., Vilkriste, L., Hujala, T., Karppinen, H., Didolot, F., Mizaraite, D., 2017. Gender in European forest ownership and management: reflections on women as "New forest owners. Scand. J. For. Res. 32 (2), 174–184. https://doi.org/10.1080/02827581.2016.1195866.

Gasper, D., Apthorpe, R., 1996. Discourse analysis and policy discourse. Eur. J. Dev. Res. 8 (1), 1–15. https://doi.org/10.1080/09578819608426650.

Goodwin, S., 2012. Women, policy and politics: recasting policy studies. In: Bletsas, A., Beasley, C. (Eds.), Engaging with Carol Bacchi. University of Adelaide Press, pp. 25–36. https://doi.org/10.1017/UPO9780987171856.004.

Government Offices of Sweden, 2019a. Jämställdhet – en självklarhet i ett modernt välfärdssamhälle, för rättvisa och ekonomisk utveckling [Equality-A Matter of Course in A Modern Welfare Society, for Justice and Economic Development] (Issue March). ⟨https://www.regeringen.se/4938a2/globalassets/regeringen/bilder/socialdepartementet/tidigare-politikomraden-och-politiker/jamstalldhet/feministisk-regering/informationsblad-feministisk-regering-mars-2019.pdf⟩.

Government Offices of Sweden, 2019b.Gender Equality Policy in Sweden. ⟨https://www.government.se/4a7738/contentassets/efcc5a15ef154522a872d8e46ad69148/gender-equality-policy-in-sweden⟩.

Harding, S., 1986. The Science Question in Feminism. Cornell University Press.

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. Scand. J. For. Res. 30 (3), 235–245. https://doi.org/10.1080/02827581.2014.1002216.

Holmgren, S., Giurca, A., Johansson, J., Kanarp, C.S., Stenius, T., Fischer, K., 2022. Whose transformation is this? Unpacking the 'apparatus of capture' in Sweden's bioeconomy. Environ. Innov. Soc. Transit. 42, 44–57. https://doi.org/10.1016/j.eist.2021.11.005.

Ingebritsen, C., 2006. Scandinavia in World Politics. Rowman & Littlefield Publishers. ⟨https://rowman.com/ISBN/9780742509665/Scandinavia-in-World-Politics⟩.

Johansson, M., Ringblom, L., 2017. The business case of gender equality in swedish forestry and mining - restricting or enabling organizational change. Gend. Work Organ. 24 (6), 628–642. https://doi.org/10.1111/gwao.12187.

Johansson, E., 1989. Beautiful Men, Fine Women and Good Work People: Gender and Skill in Northern Sweden, 1850-1950. Gender & History. https://doi.org/10.1111/j.1468-0424.1989.tb00249.x.

Johansson, K., 2019. The Discursive Resistance ofMen to Gender-equality Interventions: Negotiating "Unjustness" and "Unnecessity" in Swedish Forestry. Men and Masculinities. https://doi.org/10.1177/1097184X17706400.

Johansson, M., Johansson, K., Andersson, E., 2018. Metoo in the Swedish forest sector: testimonies from harassed women on sexualised forms of male control. Scand. J. For. Res. 33 (5), 419–425. https://doi.org/10.1080/02827581.2018.1474248.

Johansson, E., 1994. Skogarnas fria söner: maskulinitet och modernitet i norrländskt skogsarbete. [The Free Sons of the Forests: Masculinity and Modernity in Forestry Work in the North of Sweden]. Lunds Universitet.

Johansson, M., 2020. Business as Usual? Doing Gender Equality in Swedish Forestry Work Organizations. Lulea University of Technology.

Keskitalo, E. Carina H., et al., 2017. Rural-Urban Policies: Changing Conceptions of the Human-Environment Relationship. Globalisation and Change in Forest Ownership and Forest Use. Palgrave Macmillan UK.
Laszlo Ambjörnsson, E., 2021. Performing female masculinities and negotiating femininities: challenging gender hegemonies in Swedish forestry through women's networks. Gend. Place Cult. 28 (11), 1584–1605. https://doi.org/10.1080/0966369X.2020.1825215.
Lidestav, G., 2010. In competition with a brother: women's inheritance positions in contemporary Swedish family forestry. Scand. J. For. Res. 25 (Suppl. 9), S14–S24. https://doi.org/10.1080/02827581.2010.506781.
Lidestav, G., Berg Lejon, S., 2013. Harvesting and silvicultural activities in Swedish family forestry – behavior changes from a gender perspective. Scand. J. For. Res. 28 (2), 136–142. https://doi.org/10.1080/02827581.2012.701324.
Lidestav, G., Egan Sjölander, A., 2007. Gender and forestry: a critical discourse analysis of forestry professions in Sweden. Scand. J. For. Res. 22 (4), 351–362. https://doi.org/10.1080/02827580701504928.
Lidestav, G., Ekström, M., 2000. Introducing gender in studies on management behaviour among non-industrial private forest owners. Scand. J. For. Res. 15 (3), 378–386. https://doi.org/10.1080/028275800448011.
Lidestav, G., Johansson, M., Huff, E.S., 2019. Gender perspectives on forest services in the rise of a bioeconomy discourse. In: Hujala, T., Toppinen, A., Butler, B.J. (Eds.), Services in family forestry. Springer Nature, pp. 307–325. https://doi.org/10.1007/978-3-030-28999-7_15.
MacGregor, S., 2006. Beyond Mothering Earth: Ecological Citizenship and the Politics of Care. UBC Press.
Östlund, L., Öbom, A., Löfdahl, A., Rautio, A.-M., 2020. Women in forestry in the early twentieth century – new opportunities for young women to work and gain their freedom in a traditional agrarian society. Scand. J. For. Res. 35 (7), 403–416. https://doi.org/10.1080/02827581.2020.1808054.
Persson, B., 2011. Konflikter och ömsesidigt beroende: Skogsbygden och skogsarbetets organisering [Conflicts and interdependence: the forest area and the organization of forest work]. In: Antonson, H., Jansson, U. (Eds.), Jordbruk och skogsbruk i Sverige sedan år 1900: Studier av de areella näringarnas geografi och historia. Kungl. Skogs- och lantbruksakademien, Stockholm, pp. 354–370. ⟨http://urn.kb.se/resolve?urn=urn:nbn:se:su:diva-68087⟩.
Reed, M., 2003. Marginality and gender at work in forestry communities of British Columbia, Canada. Journal of Rural Studies. https://doi.org/10.1016/S0743-0167(03)00021-4.
Ringblom, L., Johansson, M., 2020. Who needs to be "more equal" and why? Doing gender equality in male-dominated industries. Equal. Divers. Incl. Int. J. 39 (4), 337–353. https://doi.org/10.1108/EDI-01-2019-0042.
Rönnblom, M., Eduards, M., 2008. Genusperspektiv på statsvetenskap [Gender Perspective on Political Science], Högskoleverket.
Squires, J., 2005. Is Mainstreaming Transformative? Theorizing Mainstreaming in the Context of Diversity and Deliberation. Social Politics: International Studies in Gender, State & Society. https://doi.org/10.1093/sp/jxi020.
Stark, A., 2007. Don't disturb the men: a viable gender-equality strategy? Global Perspectives on Gender Equality. Routledge, p. 15.
Subrahmanian, R., 2004. Making sense of gender in shifting institutional contexts: some reflections on gender mainstreaming. IDS Bull. 35 (4), 89–94. https://doi.org/10.1111/j.1759-5436.2004.tb00160.x.
Swedish Board of Agriculture, 2019. Sweden – Rural Development Programme (Issue 6.1). ⟨https://nya.jordbruksverket.se/download/18.3be9f42016bd87d7cecec84d/1569578764257/Landsbygdsprogrammet2014_2020.pdf⟩.
Swedish Forest Agency, 2019. Åtgärder för en jämställd skogssektor [Measures for an Gender Equal Forest Sector]. ⟨https://www.skogsstyrelsen.se/globalassets/om-oss/publikationer/2019/rapport-2019-04-atgarder-for-en-jamstalld-skogssektor.pdf⟩.
Swedish Ministry of Agriculture, 2004. Det går långsamt fram. – jämställdheten inom jord- och skogsbrukssektorn [Slow to Advance – Gender Equality in the Agriculture and Forestry Sector] (Issue Departementsserien). Departementsserien. ⟨https://www.riksdagen.se/sv/dokument-lagar/dokument/departementsserien/ds-2004-39-_GSB439⟩.
Swedish Ministry of Agriculture, 2007. En skogspolitik i takt med tiden [A Forest Policy in Line with the Times]. In Regeringens proposition 2007/08. Jordbruksdepartementet. ⟨https://data.riksdagen.se/fil/1C52949F-B4D6-4C3B-8FBC-E636715CD15B⟩.
Swedish Ministry of Agriculture, 2008. Rural Development Programme for Sweden – 2007–2013. ⟨https://www.government.se/49b727/contentassets/2d61e8281b764b7297e1a6e4a3c76d1b/the-rural-development-programme-for-sweden-the-period-2007-2013-the-entire-programme⟩.
Swedish Ministry of Enterprise and Innovation, 2011a. Konkurrenskraft kräver jämställdhet – Jämställdhetsstrategi för skogsbrukssektorn [Competitiveness Requires Equality – Gender Equality Strategy for the Forestry Sector].
Swedish Ministry of Enterprise and Innovation, 2011b. The Forest Kingdom - with Values for the World.
Swedish Ministry of Enterprise and Innovation, 2018. Strategi för Sveriges nationella skogsprogram [Strategy for Sweden's National Forest Program]. Näringsdepartementet.
Torfgård, L., Bhatia, R., Blomquist, M., Tunberg, M., 2020. Redefining Digital Bioeconomy: Reviewing How the Digital Transformation Affects Gender Inequalities in the Nordic Bioeconomy. ⟨https://nordicforestresearch.org/wp-content/uploads/2021/01/BioEquality-report-2.pdf⟩.
Törnlund, E., et al., 2002. Floating Timber in Northern Sweden: The Construction of Floatways and Transformation of Rivers. Environment and History.
Umaerus, P., et al., 2013. Gendered business activities in family farm forestry: From round wood delivery to health service. Scandinavian Journal of Forest Research. https://doi.org/10.1080/02827581.2013.793385.
Umaerus, P., Högvall Nordin, M., Lidestav, G., 2019. Do female forest owners think and act "greener"? For. Policy Econ. 99, 52–58. https://doi.org/10.1016/j.forpol.2017.12.001.
Vail, D., 1996. "All Sweden Shall Live!" Reinventing community for sustainable rural development. Agric. Hum. Values 13 (1), 69–77. https://doi.org/10.1007/BF01530468.
Wigren-Kristoferson, C., 2013. Om konsten att jämställdhets säkra ett landsbygdsprogram [On the Art of Gender Equality Securing A Rural Program].
Winkel, G., 2012. Foucault in the forests—a review of the use of 'Foucauldian' concepts in forest policy analysis. For. Policy Econ. 16, 81–92. https://doi.org/10.1016/j.forpol.2010.11.009.
World Bank, 2020. Agriculture, Forestry, and Fishing, Value Added (% of GDP), Sweden. ⟨https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS?locations=SE⟩.
World Economic Forum, 2019. Global Gender Gap Report 2020. ⟨http://www3.weforum.org/docs/WEF_GGGR_2020.pdf⟩.

Alizée Ville is a PhD candidate at the University of Helsinki, investigating the inequalities stemming from the forestry sector in the Congo Basin. With a background in economics, her work focuses on the impacts of international trade and investment on forest management and international forest policy.

Dr. Grace Wong is a researcher at the Stockholm Resilience Centre of Stockholm University and an Associate Professor at the Research Institute for Humanities and Nature in Kyoto, Japan. Her current research examines issues of social and environmental justice in changing forest-agriculture frontiers, with a particular emphasis on the politics of forest and land, intersectionality, and agency.

Dr. Amanda Jiménez Aceituno is a researcher at the Stockholm Resilience Centre and managing director at the ISDL in Leuphana University of Lüneburg. From 2017 to 2019 she worked as a postdoctoral researcher on Sustainable Transformations and the Seeds of Good Anthropocenes project. Her research seeks to explore ways to operationalize transformations theory into analytical frameworks and participative methods that can contribute to improving sustainability practice. She uses gender and equity as lenses for approaching her work.

Dr. Andrea Downing is a researcher and leader of the Stewardship and Transformative Futures theme at the Stockholm Resilience Centre, and researcher on the Global Economic Dynamics and the Biosphere program at the Swedish Royal Academy of Sciences. Her research links global perspectives on resilience thinking and social ecological systems to sustainable development needs at sub-global scales. Her research focuses on differentiating and specifying interlinked environmental-human dimensions of global sustainability, and on understanding how sub-global processes combine and influence each other across scales to shape dynamics at a global scale.

Dr. Mawa Karambiri is a policy scientist at the World Agroforestry Centre (ICRAF), member of the Helsinki Sustainability Centre (HELSUS), and visiting scientist at the University of Helsinki. Her work is about gender, local democracy, community forestry, and forest policy translation into the local level.

Dr. Maria Brockhaus is Professor and Chair of International Forest Policy at the University of Helsinki, and a member of HELSUS, the University's Sustainability Centre. Her main research themes are forest policy and governance in climate change mitigation and adaptation, the political economy of tropical deforestation, policy and institutional change, and related policy networks and discourses.