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Author(s): Näyhä, Annukka; Wallius, Venla

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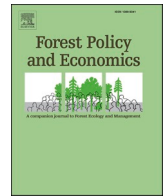
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Actors, discourses and relations in the Finnish newspapers' forest discussion: Enabling or constraining the sustainability transition?

Annikka Näyhä^{a,b,*}, Venla Wallius^{a,b,c}

^a Jyväskylä University School of Business and Economics, Finland

^b School of Resource Wisdom, University of Jyväskylä, Finland

^c European Forest Institute, Joensuu, Finland

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ABSTRACT

In many countries with plentiful forest resources, forests are at the core of the agendas to achieve sustainable societies. However, there is plenty of disagreement among societal actors about forest-related issues. This is also the case in Finland, where culture and income have traditionally relied on the forests. However, promoting the sustainability transition requires in-depth knowledge of the involved actors. The main goal of this article is to identify key actors, their discourses and relations in the Finnish newspaper discussion on forests and their utilization. The data consists of the leading national newspaper *Helsingin Sanomat* (HS) and *Maaseudun Tulevaisuus* (MT), which is addressed to rural actors. The sample consists of 283 articles from 2019 to 2021. Critical discourse analysis was chosen as the method of analysis. The key actors in HS were the researchers and politicians and in MT the forest-based companies, forest owners and their interest organizations. In MT hegemonic discourses originated from the needs of forest owners and businesses whereas in HS the forest per se was the origin of many discourses, with a focus on forest-related policies and environmental sustainability. In both newspapers, politicians were seen as the most powerful actors steering the forest-related transition. Otherwise, direct discussion of power relations was almost non-existent. Forest industries were criticized rarely, and large companies had a passive role in the debates. Market sector actors hold existing structures, creating structural power that hampers the change. However, there are signals that many actors are seeking platforms to create shared understandings.

1. Introduction

Changing the world for the better. Changing ecosystems and societies to be more sustainable and more just. These goals are currently manifested in diverse studies in interdisciplinary research fields. Many of these studies – despite varying concepts and focuses – also indicate the role of human actors and knowledge as change agents (Avelino, 2021). This study is not an exception in its ultimate endeavours.

Forests and forest resources are a crucial part of global ecological, economic, and social sustainability, having effect on sustainability transition in various ways (Bidmon and Knab, 2018; FAO, 2020; IPCC, 2021). Especially in many nations and societies with plentiful forest resources, forests and their utilization are at the core of the countries' agendas to achieve more sustainable societies. Global, EU-level and national strategies, guidelines and regulations emphasize the potential created by circular, wood-based bioeconomy (e.g., Finnish Government, 2022; European Commission, 2018; Pülzl et al., 2017). At the same time,

forest protection and the sustainable use of forest resources are seen as major societal challenges (e.g., Takala et al., 2019; Kärkkäinen et al., 2022; Sierota and Miścicki, 2022; Mack et al., 2023).

The traditional Finnish saying – Finland lives from the forest – encompasses the significance of the forests and forest-based sector (FBS) for Finnish society. For centuries, Finland's income, economy and culture have relied heavily on the forests and their utilization and continue to do so today. Large pulp and paper companies with a combined turnover of over 20 billion euros annually dominate the forest-based regime (Ernst & Young Advisory, 2023; Natural Resources Institute Finland, 2024). Strong structural changes have characterized the global FBS for nearly two decades (Hetemäki and Hurmekoski, 2016; Kajanus et al., 2019), concerning both small-scale forest owners and entrepreneurs as well as large companies also in Finland. For the FBS, these changes have not only created strong demands to renew traditional business models, which are based on the intensive use of wood, but also opened up space for new businesses (Näyhä, 2019, 2020; Kunttu et al.,

* Corresponding author at: University of Jyväskylä, P.O. BOX 35, FI-40014, Finland.

E-mail addresses: annukka.nayha@jyu.fi (A. Näyhä), venla.j.wallius@jyu.fi (V. Wallius).

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2020; Wallius et al., 2022). However, despite widely agreed goals and the potential for novel businesses towards higher added value products and services, large-scale production continues to dominate in the FBS (see, e.g., Hansen, 2010; Hetemäki and Hurmekoski, 2016; Hietala and Huovari, 2017; Donner-Amnell, 2020).

During the recent Covid-19 pandemic, recreational forest areas and different forest-related services have become ever more popular among citizens looking for new ways and spaces to spend their free time. Around 60 % of forests in Finland are owned by private citizens (Kulju et al., 2023) but the Nordic tradition of “everyman’s right” (also known as the freedom to roam, and more recently as everyone’s right) allows people to hike, pick berries or mushrooms and spend time in nature in these privately owned forests as well. This means that most Finnish people have a personal relationship with forests. These human–forest relationships are defined by people’s individual values and needs, and by their roles in different communities and organizations (Halla et al., 2023) meaning also that forests and their utilization are weighted by numerous hopes and demands, which often fit together difficultly (Kleinschmit et al., 2014; D’Amato et al., 2019; Näyhä, 2019; Halla and Laine, 2022; Halonen et al., 2022).

Along with the call for more efficient environmental management, renewal of policies and higher value-added production, requirements for more transparent and constructive dialogue on forest-related issues with stakeholders have also increased. From a variety of societal actors’ perspectives, obtaining comparable information and understanding regarding the ongoing transition is often challenging. Overall, there is plenty of confusion and a high degree of polarization among the societal actors about forests, and commonly accepted future goals for forests and their utilization cannot often be found (Mustalahti, 2018; Näyhä, 2019, 2021; Takala et al., 2019; Vainio et al., 2019).

Sustainability transitions are not possible without the involvement and aligned efforts of multiple actors, so it is natural – as mentioned in the beginning of this section – that many transition studies indicate the role of diverse human actors as change agents (Köhler et al., 2019; Avelino, 2021). Further, understanding transitions is not possible without a more detailed and structured understanding on the involved actors, and their roles and relations – the information which is often missing due to lack of transition research concentrating on these issues. (Fünfschilling and Truffer, 2016; Wittmayer et al., 2017; Köhler et al., 2019; Avelino, 2021). Power and various aspects of it, including power relations and struggles between the actors, are inseparable parts of transition (Köhler et al., 2019). However, research fields studying transitions often overlook various perspectives related to power and its manifestations (Avelino and Wittmayer, 2016; Köhler et al., 2019; Avelino, 2021).

Due to their significant role for Finnish society, forests are also abundantly discussed and debated in different media channels. Media is a powerful channel for transmitting information, raising awareness, and influencing the attitudes and beliefs of media consumers (Rogers, 2003; Sanz-Hernández et al., 2020). There are various mass media channels such as television, radio, social media, textbooks, and printed and online newspapers. The media’s role in selecting the issues that are put on the public agenda is crucial, as the media gives certain topics the space and a platform for public discussion (De Waal and Schoenbach, 2008). Therefore, in the forest-related discussion in the media, some issues are also given primacy over others, some issues are excluded altogether, and narration is always provided from a certain perspective (Takala et al., 2020). According to Fairclough (1995), media outputs are socioculturally shaped but at the same time they also constitute society. Fairclough further highlights that the analysis of media language should be seen as an important tool for exploring social and cultural change: “We are living through a period of rapid and continuous change in society and culture, the media play a significant role in reflecting and stimulating more general processes of change, and the practices of the media are correspondingly in constant flux” (Fairclough, 1995, p. 61).

The main goal of this article is to identify key actors and their

discourses and mutual relations in the Finnish printed media discussion on forests, their utilization, and related future views. On one hand, this study aims to give an overview of the actors and their discourses. On the other, it aims to identify more in-depth views and relations related to power, change needs, and conflicts in the discourses of various societal actors. From the practical perspective, the study produces information on the views, arguments, and relations of diverse societal actors on forests which, in turn, can increase understanding of different actors towards each other. We hope that this knowledge could facilitate more fruitful societal discussion on forests and their utilization. Ultimately, as we started this article by stating the goal of changing societies to be more sustainable and more just, we believe that by understanding each other’s views better, the societal actors can build more sustainable societies through better aligned efforts and goals. Even though the study focuses on Finland, Finnish actors, and their views on forests, we believe that the study brings knowledge applicable for other countries and in the context of other natural resources, since these complex and intertwined issues, actors and relations are not connected only to forests in a specific region. From the theoretical point of view, this study contributes to the literature on sustainability transitions by exploring the societal system in which forest-related (transition) actors, their discourses and stakeholders are embedded. Specifically, it partakes in the research on the roles of different societal actors and their reciprocal relations from the perspective of power relations. Overall, the study aims to reflect these outcomes in the context of sustainability transition and its promotion.

2. Theoretical background

Transition research is an interdisciplinary field which focuses on structural change in societal systems (Wittmayer et al., 2017). Transition studies can promote ongoing sustainability transitions by offering new understanding and perspectives (Köhler et al., 2019).

However, it is important to understand that – as Köhler et al. (2019) argue – sustainability transitions have many features that make them a “distinct and demanding topic in sustainability debates and the broader social sciences” (p. 2). *The relation between stability and change* is one of these distinct issues in transition and transition studies, which refers to understanding the opposing interactions between novel practices and innovations enabling radical change vs. path dependencies and forces of stability. The notion that transitions are *multi-actor processes*, meaning that a variety of actors and societal groups are involved in the processes, is also important. Involved actors have, in turn, their own beliefs, strategies, resources and capabilities as well as agencies. Related to the involvement of many actors, there is also considerable *disagreement and contestation* between actors in transitions. It is also highlighted that *normative directionality* is needed through public policies since sustainability is a public good which cannot be fully directed by private actors. Transitions are also *long-term and uncertain processes*, with multiple transition pathways. All these characteristics make transitions complicated processes which cannot be approached fully by any single research field or theory (Köhler et al., 2019).

A multi-level perspective (MLP; Rip and Kemp, 1998; Geels, 2002) – one of the most notable approaches in transition studies – analyses transitions within and between different levels of society: niches (protected spaces for innovations), sociotechnical regimes (dominating, stable structures in societal systems) and sociotechnical landscapes (wide-scale, exogenous environment) (Geels and Schot, 2007). Transitions require emerging niche-level innovations, landscape-level changes to create pressure on the regime, and instability of regimes to give opportunities to niche innovations (Geels and Schot, 2007). Numerous studies have concentrated on analysing the interactions between these three levels and introducing different transition pathways. The focus has often been on the inertia of sociotechnical systems which can be disrupted by extreme events leading to radical change (Fünfschilling and Truffer, 2016; Runhaar et al., 2020). However, as Fünfschilling and Truffer (2016) point out, many critical reviews of transitions studies

have proposed that often gradual and endogenous processes within a sociotechnical system have a more significant role in transition and should be studied more carefully.

Focusing on structural changes – regime changes in particular – while overlooking the role of human actors and agency and their more in-depth analysis in sociotechnical transitions has aroused criticism and debates among scholars (Köhler et al., 2019; Fünfschilling and Truffer, 2016; Avelino, 2021). Köhler et al. (2019) argue (referring to Stirling, 2014; Smink et al., 2015; Fünfschilling and Truffer, 2016; Avelino and Wittmayer, 2016) that institutional perspectives enable defining different actors, their roles, institutional logics as well as their involvement in multi-actor transition. Fünfschilling and Truffer, 2016 adduce (based on the findings of Powell and DiMaggio, 1991; Scott and Meyer, 1994; Greenwood et al., 2008) that institutional theory in sociology and organizational sciences has increased understanding of actors and their operations while offering knowledge on relationship between actors and the environments. In institutional theory it is assumed that the institutional context of actors strongly affects their social actions. Wittmayer et al. (2017) note that the conceptualizing of actors – so that their relations and changes in these interactions can be analysed – deserves more attention in transition studies. As a response, they studied the concept of “role” and its applicability, determining that this concept enables one to differentiate between “transition roles” – referring to the roles of actors as supporters or hinderers for transition – and the broader concept of “social roles”. Changes expressly in the social roles of actors can indicate transformations in the societal fabric, thus guiding analytical focus on these social roles (Wittmayer et al., 2017).

Power and various aspects of it are inseparable parts of transition. In transition studies and terminology, especially in MLP, power has always been part of them, at least implicitly (Avelino, 2021). Typically, as incumbent industries in a regime are threatened by new entrants coming from a niche, incumbents exercise power when they aim to protect their businesses. In other words, power is seen as regulative and normative rules underlying sociotechnical regimes (Geels, 2010). Geels and Schot (2007) also impose power as a perspective on agency: actors and actor groups have various conflicting goals and change can happen through conflicts and power contestations. According to Avelino “we can think of power dialectically as the (in)capacity of actors to mobilize means to achieve ends” (Avelino, 2021, p. 440). However, there are also many other understandings of how power should be understood in relation to the concept of transition, which would require more in-depth inspection (Avelino and Wittmayer, 2016; Köhler et al., 2019; Avelino, 2021).

Avelino and Wittmayer (2016) introduced a multi-actor perspective (MaP) as a response to the inadequate accuracy of transition studies to define types and levels of actors. With the heuristic MaP framework, power relations between categories of actors at different levels of aggregation can also be conceptualized and understood better. MaP distinguishes (based on the Welfare Mix Model by Birch and Whittam, 2008) among four sectors – state, market, community and third sector – and between actors at different levels of aggregation: sectors, organizational actors, and individual actors. Avelino and Wittmayer (2016) highlight that it is not only important to analyse which actor has more or less power, but also to explore the types of power they can exercise and how related interdependencies can change over time. In their horizontal power typology, three types of power relations between actors can be identified: First, A has power over B. Second, A has more/less power than B to do x. Third, A and B have a different kind of power. Altogether, the MaP aims to contribute to transition research by giving descriptions of actors which are more specific and nuanced than those found, for example, in MLP analysis, by explicitly analysing the complex and diversified roles and power relations of actors and different levels of aggregation. Later, Avelino (2021) has proposed a meta-theoretical framework for analysing power in change processes. In this framework, seven power contestations were identified in the literature: power over vs. power to, centred vs. diffused, consensual vs. conflictual, constraining vs. enabling, quantity vs. quality, empowerment vs.

disempowerment and power in relation to knowledge. Importantly, Avelino (2021) has, by reflecting on these points of contestation, also suggested empirical questions (p. 441, also addressed in this study) that can be applied when exploring power from different perspectives in transition processes.

In this study, our view on change and transition is largely aligned with Fünfschilling and Truffer (2016), who present that sociotechnical change does not solely depend on technological innovation, regime features or actors and their strategies; instead, it is the dynamic interplay between all three dimensions that work in collaboration. In line with the literature reviewed here, we believe that actors, their roles, and relations – diverse power relations in particular – are essential factors in any transition process. Therefore, while being aware of traditional theoretical approaches of transition studies, especially MLP, the starting point of the analysis of this study are the actors, rather than certain levels of society or the rules structuring those. However, we remain conscious of these structural features and reflect on those in the discussion section of the study. Further, actor group, a coalition composed of actors who produce and reproduce aligned discourses, supporting each other, is also an important concept of this study. Riedy (2020), for example, applies the concept of “discourse coalition”, defining it as a defender and perpetuator of particular discourses, and has a largely similar view of the concept as we have of “actor group” in this study. However, we like to put human actors on the frontline, therefore we have chosen to apply the concept of “actor group”. Our understanding of “role” is like Whittmayer et al. (2017), and we aim to enclose both “social and transition roles” in our analysis when possible. Again, well aligned with Wittmayer et al. (2017), we understand “relations” as dynamic interactions and (purposeful) activities between different actors, more specifically, between the roles that these actors carry. Furthermore, the aim is not to analyse the actors and their discourses so that all the above presented power typologies or dimensions are reviewed in detail. Rather, we remain sensitive to the diverse power nuances and imbalances indicated and/or being (more or less) hidden in the actors’ discourses. Overall, we aim to reflect on how these power relations possibly hinder or promote transition in the context of existing structures.

3. Methodology

3.1. Sample and data

The data consists of newspaper articles collected from the Finnish newspapers *Helsingin Sanomat* (HS) and *Maaseudun Tulevaisuus* (MT), both of which have nationwide distribution. HS is the leading daily newspaper in Finland. It is the most popular in the Helsinki metropolitan area and has a slight geographic focus on the same region. It is published by the Finnish media company Sanoma Group (Sanoma Media Finland, 2023). HS has an average issue readership (AIR) of 628,000 readers (Media Audit Finland, 2021). MT is addressed to the rural areas and population working in agriculture and/or forest-related fields. MT is published by a subsidiary owned by the Central Union of Agricultural Producers and Forest Owners (MTK), which is rural actors’ interest organization (MTK, Maa- ja metsätaloustuottajain Keskusliitto 2023). MT is issued three times a week, with an AIR of 269,000 readers (Media Audit Finland, 2021). HS and MT were selected for analysis because they are the first and second most popular printed newspapers in Finland, and therefore their reporting reaches a large share of Finnish people (Media Audit Finland, 2021). Both newspapers also have Internet archives with subscriber-only and free-to-all content, thus they reach more readers than the reported AIR indicates.

Constructed week sampling was selected for sampling the data, as it considers the cyclic systemic variations in newspaper content (Lacy et al., 2001). In terms of analysing news, it is more effective than fully random sampling or a sample consisting of consecutive days only (Hester and Dougall, 2007). Each year included in the study (2019–2021) was divided into three equal seasons (January–April,

May–August, September–December). For each season, one week per magazine was constructed by identifying all Mondays during the season and then randomly selecting one Monday and continuing until a random week (Monday–Sunday) during the selected season was fully constructed, using the same constructed weeks for both MT and HS. The newspapers issued on these randomly selected dates during the constructed week were used for collecting data. Therefore, the sample consists of three constructed weeks per year, in total nine constructed weeks for the study period. As HS is issued daily and MT three times a week, one constructed week consists of seven HS issues and three MT issues. If the issue included any supplements free for all subscribers, they were included in the analysis. Supplements that needed to be ordered and paid for separately were not included in the analysis.

The newspapers from the selected dates were carefully read, and articles related to forests, wood, or bioeconomy were manually selected for the analysis. Search words included the Finnish translations for ‘wood’, ‘forest’, or ‘bioeconomy’ and their inflected forms. Bioeconomy was included as a search word because in Finland, bioeconomy is widely considered to be ‘forest bioeconomy’ due to the importance of forests in comparison to other biomass sources (Finnish Government, 2022). Therefore, bioeconomy-related articles did not necessarily mention the word ‘wood’ or ‘forest’ but were still included in the data when a factual connection to forest-based bioeconomy could be deduced. Articles were collected from the online archives of both newspapers. In some cases, there were minor differences to the printed version, but this was not found to be a major issue for the analysis. Articles that mentioned the search words only briefly (with 1–2 sentences), articles focused on issues elsewhere in the world than in Finland, appointment notices and captions were excluded from the analysis.

The full sample consists of 63 HS issues (95 articles) and 27 MT issues (188 articles), for a total of 90 issues (283 articles) during the study period. The list of the articles is presented in Appendix A. It includes the identification codes for the issue (the newspaper HS/MT and the consecutive number), dates of publication, journalists, and titles, thus providing the reader with the information for finding the original article.

3.2. Data analysis

3.2.1. Critical discourse analysis (CDA) and its application

Discursive approaches are methods and theories which explore language in diverse societal contexts (Wetherell et al., 2001). They have been indicated to be suitable for studying sociotechnical change in those contexts where change is understood to involve power contestation between different actors (Isoaho and Karhunmaa, 2019). Leipold (2014) pointed out already a decade ago that diverse discursive approaches have become increasingly popular among researchers studying forests and their governance. She has also encouraged the application of diverse discourse lenses creatively in forest-related research, suggesting that looking for responses to the questions of “where” and “by whom” could offer important insights into a forest governance.

Fairclough, 1995, citing Boudieu, 1977) argues that calling an approach “critical” relates to the recognition that our social practices, including the use of language, are closely related to causes and effects we can often be unaware of. The aim of critical discourse analysis (CDA) is to study the tension between the “socially shaped” and “socially constitutive” use of language. In other words, CDA is not just a trans-disciplinary tool for analysis; it is critical due to its efforts to indicate “non-obvious” ways that language is involved in social relations, such as power and domination. From the critical perspective, CDA is also committed to progressive social change, including prevailing large scale social challenges such as globalization or social exclusion. Through CDA, change processes can be studied in collaboration with other research fields – in the case of our study in collaboration with transition studies – by asking what changes have taken place and are ongoing in interaction with social or political issues (Fairclough, 2001, 2010).

Overall, by applying CDA, any type of semiotic material indicating interactions (including written texts) can be analysed.

This study was initiated due to the observations by the authors of this paper of the polarized societal discussions and conflicting views of the forest-related actors in Finland. CDA was seen as a suitable approach because the aim of this study is to identify power relations, change needs, and conflicts in the discourses of various societal actors on forests to increase understanding of different actors towards each other, and, ultimately, to enable these actors to jointly promote sustainability transition (see the introduction). These goals are well-aligned with the premises and commitment of CDA to social challenges. Albeit it needs to be noted, that our perspective and related application of CDA takes a wider approach being interested in all sustainability dimensions -not only in social perspective as CDA- in transition (see also Takala et al., 2019).

In our view (as also argued by, among others, Chouliraki and Fairclough, 1999), CDA is not purely a method, but its elements are tightly intertwined with applied theoretical premises. It is also noteworthy that power, its manifestations, and its role in societal change are at the core of transition studies – chosen as our theoretical background – and of CDA: actors have diverse goals and change can take place through conflicts and power contestations between the actors (Geels and Schot, 2007). In the CDA, power in discourses is considered in terms of *order of discourses* and *hegemony*. An order of discourse of some social domain can be defined as “the totality of its discursive practices, and the relationships (of complementarity, inclusion/exclusion, opposition) between them (Fairclough, 2010, p. 93). In other words, it is “a social structuring of semiotic difference, a particular social ordering of relationships between different ways of meaning-making – different genres, discourses, and styles” (Fairclough, 2010, pp. 232–233). The concept of hegemony is applied in the context of orders of discourse, which are seen as domains of hegemony and of hegemonic struggle within institutions or wider societal formation (Fairclough, 2001, 2010). Thus, dominance is an essential perspective on this ordering, as certain ways of meaning-making are dominant or mainstream whereas others are marginal, oppositional or alternative (Fairclough, 2001).

Diverse positions and approaches have been developed and adopted within CDA (Chouliraki and Fairclough, 1999). Likewise, we have set out and adapted our own version of CDA as described in this section (while at the same time understanding that all the nuances cannot be described in detail). Our approach, despite our critical orientation, also includes many descriptive elements of discourse analysis. The applied approach loosely follows the CDA framework described by Chouliraki and Fairclough, 1999, pp. 60–68 and Fairclough, 2010, pp. 234–239) by including the following elements and practices (and our interpretations on them). It starts with *perception of the problem*, and continues with *obstacles being tackled* by analysing discourses, including *analysis of the conjuncture*, *analysis of the particular practice* and *analysis of the discourse (analysis of orders of discourse and interactional analysis)*. *The function of the problem in practice* and *possible ways past the obstacles* are parts concentrating on what type of impacts problematic practices have and how they should/could be changed. *Reflexion on the analysis* is the final phase, which includes considerations on the role of the researcher and on the position from which the analysis is conducted (for this positional reflection, see section 3.3).

Fairclough has stated (1995 p. 60) the following: “Media texts are sensitive barometers of cultural change which manifest in their heterogeneity and contradictoriness the often tentative, unfinished and messy nature of change.” We fully agree with their statement, both in terms of media texts’ capability to indicate change and their complex and heterogeneous contents (which in turn makes analysis challenging).

3.2.2. The analysis process

Before the analysis, a preliminary coding framework was developed. The framework was derived from the theoretical and methodological approaches of transition research and CDA (introduced in the sections

above). The actors that initiated discourses in the articles were coded according to MaP: between the *sectors (state, market, community, third sector)* and *actors (sectors, organizational actors, individual actors)* at different levels of aggregation (Avelino and Wittmayer, 2016). However, in the studied newspapers, the interviewed individuals often represented a certain organization or sector – in MaP terms they have different roles which follow a sector-specific logic – rather than presenting their own individual views. Individual views were mainly indicated in opinion pieces from citizens. Therefore, in this study, the identified actors/actor groups are presented and discussed mainly at the level of organizations and sectors (instead of individuals). In other words, in the sections below we apply the terms *actor* and *actor group* for simplicity when referring to these organizations and sectors. All the identified actors and actor groups (which initiated discourses or provided comments in the articles) are presented in Appendix D. The dominant actor groups and their division into MaP sectors (state, market, community, third sector) are indicated in Figs. 2 and 3 and in Table 3. Identification of the actors was followed by coding *actor-specific discourses* with their main contents. Our understanding of discourse is in concordance with Fairclough's (2010) definition of discourse as a sort of language used to construct some aspect of reality (experience or social life) from a particular perspective. In our analysis, a discourse can consist of a single or several statements or comments from an actor, including one or more sentences. Three elements were recognized as common nominators both in the theoretical and methodological frameworks: *change, power, and conflicts* (and their various manifestations). Therefore, these elements were also the focus of our coding in the identified actor-specific discourses as well as of our further analysis and interpretations of those discourses.

During the first analysis phase, all the articles with their full contents were reviewed three times (See Fig. 1). During the first reading, a preliminary coding framework was processed and the categories and sub-categories for the different ways of valuating the forests and for the main themes of the articles were also created inductively (see Appendix B and Appendix C, Tables 1 and 2 for summaries). The codes *valuation of the forest* and *article theme* were seen as important for giving an overall view on the nature of the forest-based discussions. These two codes were categorized further to several sub-categories. During the second reading, these categories and sub-categories were finalized so that in the third reading round, coding could be done with the fully finished coding framework. Altogether, the final list of codes included *sector & actor (actor group)*; *actor-specific main discourses*; *change*; *power*; *conflict*; *valuation of the forest*; and *article theme*. In the first analysis phase, Atlas.ti

was applied as a qualitative analysis tool for facilitating coding and categorizing.

During the second analysis phase, the codes for *sector & actor (actor group)*, *valuation of the forest*, *article theme* and *actor-specific main discourses* were analysed in a quantitative manner (See Fig. 1). The *actor-specific discourses* by each of the actors were counted, and the share of discourses by each actor (out of all the actor-specific discourses) were calculated to find the discussion activity of different actors, that is, the dominance of each actor group in the discussions (presented in Appendix D, summaries in Figs. 2 and 3). When applicable, actor-specific discourses were given a code for their *valuation of the forest*, revealing how the forests are mainly seen as in each discourse (i.e., what is their value according to the discourse). Altogether, 18 categories with 12 sub-categories were utilized for this. The number of actor-specific discourses giving forests a certain value was counted, and the relative importance of different valuations calculated. Categories for valuation of the forest as well as the share of each valuation (out of all valuations) are presented in Appendix B. For a summary of these, see Table 2. In addition, all the articles were coded into 22 categories with 24 subcategories by their *main theme*, and the shares of each theme were calculated (presented in Appendix C; see Table 1 for a summary). One article was assigned to more than one category if the article clearly included several main themes.

At the third analysis phase, the article excerpts coded under *actor-specific main discourses, change, power and conflict* from Atlas.ti were imported to Excel and Word for further qualitative analysis and interpretations (See Fig. 1). In principle, for this qualitative analysis phase, we applied an adapted version of CDA, which we described in section 3.2.1. At this phase, the actor-specific discourses were further analysed by identifying the hegemonic discourse of each actor group as well as by studying the key features of the discourses related to change, power, and conflicts. More specifically, we examined what type of relations and interactions exist between the actors, and which actors are, for example, seen to cause conflicts.

In the results section, codes for the quotes from the newspapers are included. The quotes are listed in Appendix E, that is, the quote code tells the identification number for the analysed article and based on this quote code, the quote can be found in the Appendix E. The aim of the quotes is to enrich and complement the reported results as well as to provide more nuance and contextual accents, overall enabling the readers of the study to evaluate the quality of the interpretations made by the researchers.

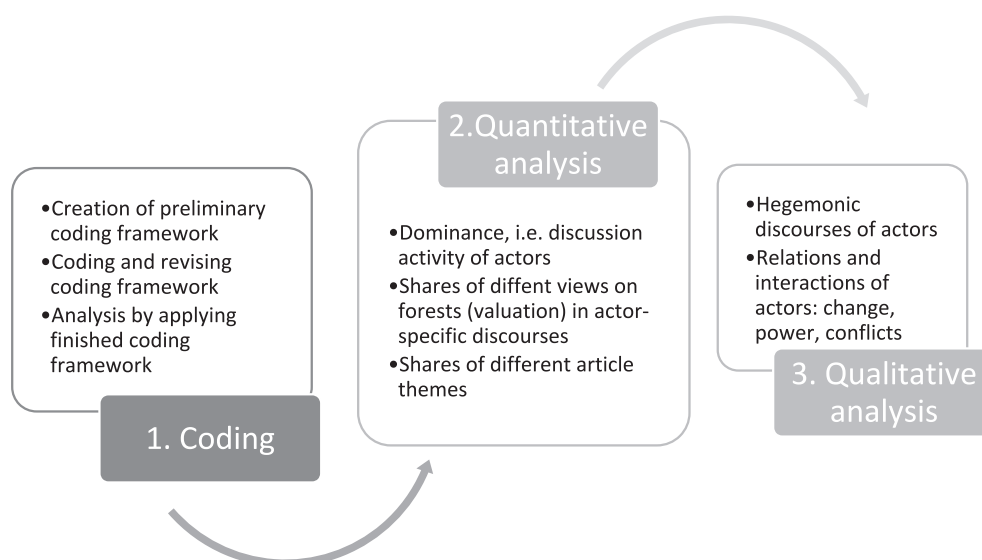


Fig. 1. The analysis process.

3.3. Reflexivity of the researchers

Many social scientists believe that the researcher cannot be fully separated from the research, meaning that the implications of the identity of the researcher affect the data collection and analysis, and therefore this identity needs to be acknowledged (Wetherell et al., 2001). Chouliaraki and Fairclough (1999) highlight that CDA, like other approaches in critical social sciences, must be reflexive and self-critical about its own institutional position. Therefore, we include descriptions of our relation to the studied topic in this section, especially from the perspective of the corresponding author of this paper, who has led the research process and conducted most of the analysis.

I, as a corresponding author, position myself as a sustainable business management scholar focusing on transition in renewable natural resources-based sectors, the FBS in particular. I have a multidisciplinary background with degrees both in biology and business management and work experience, in addition to two of the mentioned fields, from forest sciences and future studies. In principle, my current research examines what type of actors, practices, and shared value creation are needed for supporting innovations for sustainability and, by extension, the sustainability transition. In my work I draw on transdisciplinary theoretical premises. My relation to forests has developed through education and research as well as through my recreational use and ownership of forests, which has been an intergenerational feature in my family. The forest-related views of the co-author of the paper are shaped through her background in environmental sciences and environmental management as well as her close personal relationship with forests. In her research, she has been exploring societal perceptions of forests, bioeconomy and wood-based products.

In addition, we believe in the need for a regime change in the FBS in the current society, as the current forest-related discourses show signs of conflict among numerous dissatisfied stakeholders. The current situation is unsustainable according to many indicators and destabilization of the current FBS regime would promote wider scale sustainability transition. In terms of environmental sustainability, the kind of intensive forest management for wood production that is seen in Finland, is viewed as threatening biodiversity and increasing climate challenges (Eggers et al., 2022, Kalliokoski et al., 2020, Mönkkönen et al., 2022). For social sustainability, many societal actors feel that they are unfairly treated when it comes to forests and their utilization (Mustalahti, 2018). In addition, economic sustainability could be promoted by new business models and higher value-added products as indicated by many studies and policies (Kajanus et al., 2019; Finnish Government, 2022). From this perspective, our study is normative, as is the nature of CDA studies (see Fairclough, 2010).

Our aim has been to conduct a study which explores the studied topic and phenomena as objectively as possible. We have striven to reflect and consider issues from several angles and perspectives, to better understand diverse views and relations of forest related actors and their impact on sustainability transition.

3.4. Characteristics and limitations of the data

We acknowledge that newspaper data has its own characteristics, which needs to be considered. Media actors (editors, journalists) have power themselves to make choices such as which topics are discussed in the papers and how, who are the societal actors to be interviewed or quoted, and importantly which topics and actors are not given space and voice in the articles (see also De Waal and Schoenbach, 2008). Thus, in addition to the actor-based, discursive power (hegemony) and discussion activity identified in the articles, we need to take into account power that media actors themselves hold through their conscious or unconscious choices and decisions. The role of media should be further discussed and examined with experts in the fields of journalism and media studies. Moreover, newspaper data has its limitations, especially for the in-depth analysis of relations between diverse actors.

Due to the sampling method chosen for this study – constructed week – it is possible that not all sporadic forest-related issues and disputes are covered in the sample. However, it is unlikely that relevant, overarching themes would not be included, as the number of articles included in the sample is abundant. A single constructed week has proven to be sufficient for reliably estimating the content of up to six months of newspaper editions (Hester and Dougall, 2007). However, to ensure reliability, three constructed weeks per calendar year were utilized in this study.

It is also important to note that the actor groups created for this study are not totally homogenous in their views and discourses, and within each actor group there are various viewpoints and diverse voices. However, this dataset and its analysis did not allow us to create more accurate actor groups or to detect and report these differences in a more detailed manner. Thus, we are left with many compelling questions that deserve more investigation. Overall, we recognize that our critical analysis of discourse is by no means complete. As Taylor (2001) highlights, discourse data are typically rich, meaning that it is probably not possible to reach a point of analysis where nothing more could be found in the data. However, this study creates an important opening and the essential basis for the next phase of study on more nuanced and in-depth views of the actors and their relations gathered through the actor interviews.

4. Results

4.1. Main article themes and valuation of the forest

The most dominant article theme categories varied between newspapers. In HS, the dominant article theme category was forest-related policies and strategies (28 %), including articles on climate, land use, certification, and taxation issues followed closely by environmental sustainability (27 %), in which climate change was the most distinct issue. Accordingly, forests were valued above all as carbon stock or sink (19 %). Human recreation, wellbeing and health was the third largest article theme category (17 %) in HS. In MT, the most distinct article theme category was business (32 %) covering themes related to diverse businesses based on wood- and forest-based products and services, followed closely by policy-related articles (28 %). Consequently, forests were largely valued as a source of income, business and poverty (26 %) and raw material (15 %). In both newspapers, the third largest category for valuation of the forest was “target of conflicting interest” (HS 15 % and MT 12 %).

The dominant categories for the article themes and the valuation of the forest are presented in Tables 1 and 2 below and in detail in Appendices, which include all the identified categories for article theme (Appendix C) and for valuation of forest (Appendix B). The formulation of the categories and their analysis is explained in detail in 3.2.2.

Table 1

The most dominant categories for the article themes in HS and MT.

Category for article theme	HS articles	% of HS articles	MT articles	% of MT articles
Policy	27	28 %	53	28 %
Environmental sustainability	26	27 %	26	14 %
Human recreation, wellbeing, health	16	17 %	13	7 %
Urban forestry, city planning	11	12 %	2	1 %
Business	10	11 %	60	32 %
Forest management	8	8 %	23	12 %
Economy	4	4 %	24	13 %
Ownership	2	2 %	25	13 %

Themes covered in at least 10 % of articles in either of the newspapers are included. For the full table, see Appendix C.

Table 2
The most dominant categories for valuation of the forest in MT and HS.

Category for valuation of the forest	Discourses in HS	% of HS discourses	Discourses in MT	% of MT discourses
Carbon sink/stock	56	20 %	73	10 %
Source of human wellbeing/recreation	46	16 %	30	4 %
Target of conflicting interest	44	15 %	85	12 %
Biodiverse ecosystem	26	9 %	23	3 %
Wood raw material source	22	8 %	105	15 %
Income/business/poverty	18	6 %	187	27 %
Target of management	11	4 %	58	8 %
Target of conservation or protection	7	2 %	32	5 %
Employment	2	1 %	37	5 %

Valuations given in at least 5 % of articles in either of the newspapers are included. For the full table, see Appendix B.

4.2. Key actors and sectors

Figs. 2 and 3 show the dominant actor groups in the discussions organized according to four MaP sectors (state, market, community, third sector) in both newspapers. The most dominant actor group in HS in forest-related discussions were researchers (comprising 24 % of all discourses identified in HS), Natural Resources Institute Finland (Luke) being especially active in the discussion. In addition, politicians (18 % of all discourses, including actors from local, national and EU level) and

citizens (11 % of all discourses, mostly through their opinion pieces), creative industry actors including poets, authors, musicians, and architects (9 % of all discourses) and the editors and journalists of the HS through their editorials, commentary pieces and columns were active in forest-related discourses (9 % of all discourses) (Fig. 2).

In MT, FBS companies and their interest organization Finnish Forest Industries, as well as forest owners and their interest organizations MTK were the most active actors (comprising 18 % and 17 % of all discourses identified in MT, respectively), followed by politicians (16 % of all discourses), researchers (10 % of all discourses) and the editors and journalists of MT (6 % of all discourses) (Fig. 3). It is relevant to note that MTK is an owner of the subsidiary which publishes MT. This connection between the MTK and MT is an important issue to be considered when interpreting the results.

See Appendix D for detailed information, including all the identified actor groups and their share of discourses, that is, “the dominance of each actor group in the discussions” (for an explanation of how dominance is calculated, see 3.2.2).

4.3. Actor specific discourses

In the following sections, key actor groups, following the order of their dominance in discourses in the each of the newspapers will be presented with their actor-group specific hegemonic discourses. Specific attention has been placed on the manifestation of change, power, and conflicts as explained earlier. At the end of the section, shared discourses between the dominant groups will be presented.

4.3.1. Helsingin Sanomat

4.3.1.1. Researchers, Finnish Climate Panel & IPCC: Forests for climate. The researchers from several Finnish universities and research institutes, as well as including Finnish Climate panel members and IPCC representatives (as “third sector” representatives), were the most

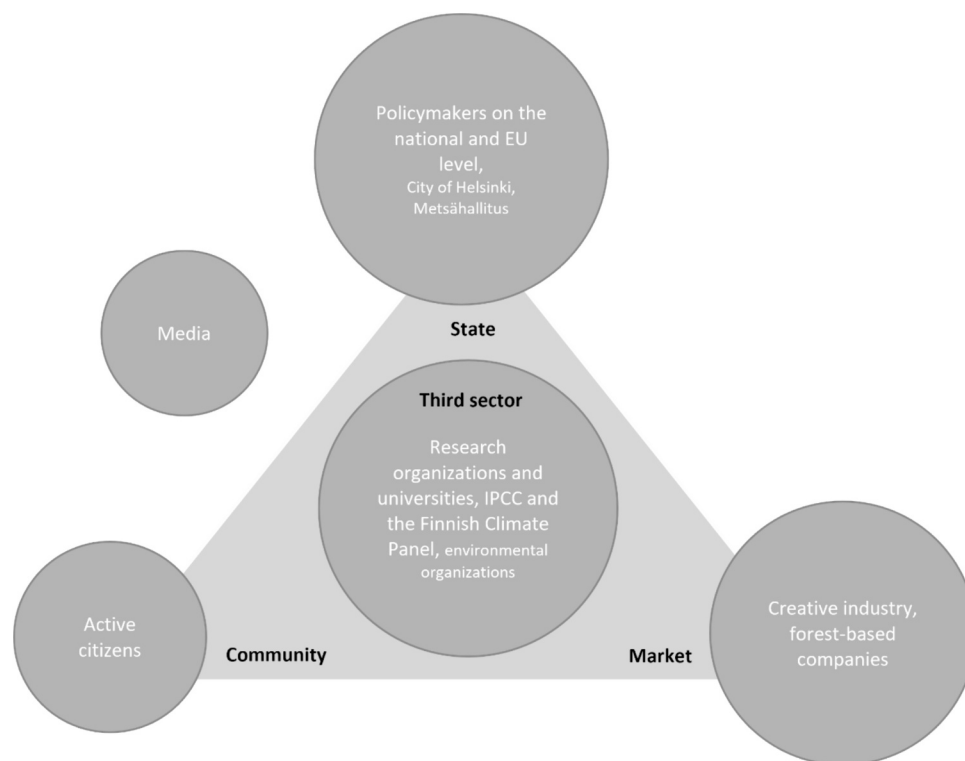


Fig. 2. The dominant actor groups in the HS discourses. The size of the circles indicates the share of the actor group’s discourses of all actor-specific discourses. The font size within the circles indicates the relative share of the actor’s discourses (a bigger font indicates a larger share, a smaller font a smaller share). Please note that since the media actors (the editors and journalists of the newspapers) do not fully fit into any of the four MaP sectors, they are presented as unattached to the triangle.

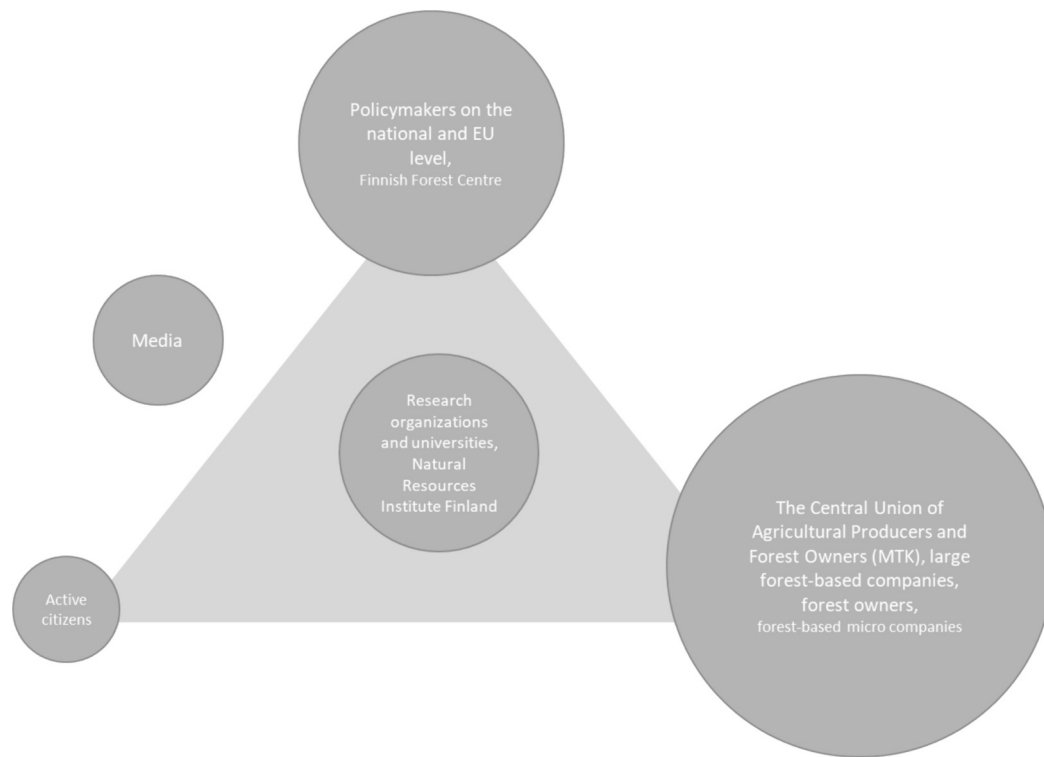


Fig. 3. The dominant actor groups in the MT discourses. The size of the circles indicates the share of the actor group's discourses of all actor-specific discourses. The font size within the circles indicates the relative share of the actor's discourses (a bigger font indicates a larger share, a smaller font a larger share). Please note that since the media actors (the editors and journalists of the newspapers) do not fully fit into any of the four MaP sectors they are presented as unattached to the triangle.

predominant actors in the media discussion producing hegemonic discourse on *climate change mitigation actions*. The Intergovernmental Panel on Climate Change (IPCC) report published in fall 2018 with its urgent message on the possibility for limiting global warming to 1.5 °C by means of fundamental changes in human lifestyle and attitudes, received plenty of attention. The key outcomes of the IPCC report were reported in several articles, reflecting the impacts of the report outcomes on Finland and the nation's forest utilization. The Finnish scientific society active in the discussion strongly agreed with the key messages of the IPCC report on the need to reduce land use related emissions and increase carbon sequestration. The protection of wetlands, peatlands and forests were seen as important actions also in Finland. The cultivation habits and their effects of uneven management on carbon sequestration were also discussed, but one of the leading Finnish experts pointed out that reducing the overall cutting yield is more significant in climate change mitigation than the cultivation practice. Timely mitigation and adaption practices were seen as crucial to avoid ill-fated and expensive consequences. The researchers also brought up many global aspects and the responsibilities of developed countries, including Finland, in mitigation.

The policies and realized mitigation and adaptation actions were criticized – especially by members of the Finnish Climate Change Panel – to be inadequate and slow. Land use emissions have not been paid enough attention by the state actors and government. For example, the chair of the Finnish Climate Change Panel proposed denying forest clearances for agriculture, restoring peat fields to forests or wetlands, and reforesting unutilized fields. In addition, the National Forest strategy was the target of plentiful criticism, and ecological sustainability in terms of climate change and biodiversity loss mitigation were seen to be overly neglected in the strategy. [quote HS33] The researchers highlighted the importance of comparing the received benefits from the forest industry production to benefits attained from preserving forest carbon stocks and related emission trade in terms of the national economy and societal welfare. The researchers believed that there

should be national-level agreement on forest resource utilization and better understanding on the “big picture” of forest utilization. [quote HS29].

The discourse on the importance of nearby forests and nature grew in number after the start of the Covid-19 pandemic. Science-based knowledge supported the other presented views on the importance of forests for promoting physical and mental human health and wellbeing, as well overall national health. Researchers also brought up several challenges related to the availability of these environments. The goals for condensing the urban environments and structures – especially in the Helsinki (capital city) area – were seen to threaten urban forests and nature and as decreasing the revitalizing effects and quality of nearby nature. Environmental justice and health-related equality – meaning the availability of and access to nature and forest areas for all citizens – were seen as important.

A bit surprisingly, in the researchers' discourses, climate change mitigation overshadowed the biodiversity discussion. On the other hand, the release of the IPCC report explains the plentiful articles on climate in the studied period. In addition to climate change and biodiversity discourses, researchers from a variety of disciplines touched upon diverse issues related, for example, to the health effects of nature-based products, forest berry yields, and the forest-related observations and questions of children. This in turn, indicates the journalistic choices and goals of HS to cover different forest-related perspectives. Nearly unanimously, politicians were held mainly responsible for climate change mitigation and guaranteeing environmental justice.

4.3.1.2. Politicians: Forests for saving and using. The hegemonic discourse created by the politicians (as “state” representatives) concentrated largely on forest utilization: *how much forests should and could be harvested in Finland*, and the related national goals and dilemmas as well as what goals should be pursued in the European Union's policymaking. The most attention was put on the preparation of the EU forest strategy which was ongoing during the studied period. There were

strong disagreements between the Finnish political parties, especially between the Green Party and other government parties on the content of the EU forest strategy and the goals affecting Finnish forests and their utilization. The Green Party accused the Centre Party and Social Democratic Party of Finland of lobbying for goals in the European Parliament that were not agreed on by the Finnish government, especially ones which have a negative effect on environmental sustainability. [quotes HS73, HS75].

There were also Finnish members of the European Parliament (MEP) from across political lines who called for more ambitious goals and actions from Finland and its members of the EU parliament in terms of forest protection and conservation. The market potential related to carbon sequestration was also brought up. A Finnish MEP from the Green Party made a striking proposal connected to the European Commission's carbon sink regulation to increase sequestration goals notably in the EU, which, if actualized, would require Finland to reconsider its harvesting quotas and practices. [quote HS90] There were also several statements demanding wider shared understandings on forest utilization and protection among EU member states.

The national level discourses were closely connected to the carbon neutrality goals, however embodying the different approaches, means and emphasis of different parties. The discourses reflected agreement in several issues but there were also more extreme views that stood clearly out. [quote HS3] Importantly, the realization of the means for solving and/or mitigating challenges related to forest utilization were largely seen as a work-in-progress, thus politicians shared, at least to some extent, the views of other societal actors on their responsibility and power over these issues. [quote HS14a] One of the key conflicting, unsolved issues in national policy was how the wood raw material demands of the FBS can be fulfilled while simultaneously maintaining carbon stocks. Related to this, the important role of forest owners and their choices about management and harvesting were brought up. Growing thicker forests and older trees would favour carbon stocks but do not serve the FBS interests and their demand for pulp wood. Moreover, in local politics, carbon neutrality goals and efforts such as planting trees were discussed. Local politicians highlighted the significance of the state in supporting municipalities in their efforts to protect nearby nature for recreation and maintaining biodiversity. Altogether, it is obvious that there is plenty of pressure on and accusations towards politicians from other societal actors to solve the dilemma of how to protect forests while responding to the various human needs, and most of all, providing raw material for FBS. The struggles and relations of the parties and members are strongly affected by EU-level politics and power contestations.

4.3.1.3. Citizens: Forests for all. By the order of their dominance in discourses, citizens had a slightly bigger share (11 % of all discourses) than did the creative industry actors (9 % of all discourses). The hegemonic discourse created by the citizens (as "community" representatives) centred around *forest utilization and protection*. This discourse also contained plenty of adversarial views. Forest degradation was seen a concern both in the context of nearby urban forests and parks as well as at the national and global scale. At the core of the discussion were the worries of Helsinki residents over losing rich and biodiverse urban nature, places for recreation and cultural and historical landscapes when urban planning aims at condensing and green areas are re-targeted for housing. The active residents and resident groups were the leading voices in the discussion supported by the researchers, as indicated in the previous section. The city officials were blamed for poor communication and local politicians for bad decision-making. [quote HS57] On the national level, clear cuttings were a key target of negative views and discussions. Finland and its forest were also seen as part of the biosphere and global community, and thus Finnish politicians and voters have possibilities and power to act as change agents for securing both the climate and diverse ecosystems. [quote HS2] There were demands for

more open societal discussion on forest utilization to avoid confrontation between different actors and modes of utilization. In particular, the practices and aims to meet economic goals in forest management of the state and Metsähallitus – an organization which manages state-owned land and water areas as the state's representative – were criticized. In addition to the state's responsibilities, the responsibility of individuals when visiting and utilizing forests based on their Everyman's Right, were highlighted. The forests were seen as a resource and environment to be treasured and appreciated, and, for example, littering in the forests was criticized. Often forests and harvesting engendered extremely strong personal feelings. [quote HS84].

The opinion pieces from citizens included a wide spectrum of topics from anxiety caused by wide-scale, global forest degradation and climate issues to local, urban nature violations, and for example, children's detailed observations and questions on their surroundings. The discourses also touched upon gender equality and the underrated status of women in the FBS, the potential of the subsistence economy, different forest management options, challenges in ownership and the role of the forests in national economy. This diversity in discourses indicates the importance and closeness for Finns of forests, both mental and physical, and their cross-cutting role in society. The state and politicians were seen to hold power to make changes, yet the responsibilities and entitlements were seen as shared between all the citizens, at least to some extent. Overall, the forests are the issue which affect and are affected by variety of people in variety of ways. [quote HS17a].

4.3.1.4. Creative industry: Forests for art and inspiration. Forest are a source of unique experiences and inspiration for various artists (categorized as "market sector" representatives) and their art pieces – as their hegemonic discourse described – such as photographs, poems, and songs. Forests are also places for relaxation, recreation, and meditation. [quote HS37] Architects and interior designers described wood as a responsible, recyclable, repairable and genuine material, which "feels good". Wood and wooden surfaces were seen as trendy materials which are now favoured by customers as part of ecological buildings and construction. On the other hand, the actors were worried about the current state of the forests, considering impacts and ethicality of using wood materials. They also criticized decision-makers regarding deficient forest conservation and protection acts. [quote HS4] The discourses created by artists further foregrounded the multifaceted role of the forests for Finnish people and society. The forest is a source of inspiration and wellbeing, making even spiritual experiences possible for some people. At the same time, they were seen to target nurturing and protection. Yet again, the policymakers are expected to be responsible for policies guaranteeing the forests' existence.

4.3.1.5. Editors and journalists: Forests need better policies. The hegemonic discourse of HS editors and journalist entails the message that *the politicians are accountable for solving challenges related to climate change and biodiversity losses* through "politics in its best sense". The editors and journalists highlighted the responsibilities of the policymakers while blaming them for putting too much burden on the individuals which, in turn, can decrease the pressure on politicians. The discourse also included a notion on the role and responsibilities of the users of economic power, such as large companies. The people with power were required to concentrate on concrete solutions more than creating horror stories. [quote HS12] The weaker position of biodiversity compared to climate change challenges in the political discussions was criticized. [quote HS23] However, despite their critiques, editorials in HS focused largely on carbon stock discussion while the biodiversity received much less coverage. The government was acknowledged on increasing resources for nature protection, but it was reminded that the funding should continue over the governmental periods. Furthermore, even though there was an urgent demand for politicians and political parties

to solve environmental challenges through wise forest and climate policies and by keeping these issues in their election programmes, it was simultaneously required that the FBS, based on large-scale harvestings, needs to be supported through governmental support and policies. Again, also editors and journalists viewed the political decision-makers together with “the users of economic power” as key players in solving challenges related to climate change and biodiversity losses through wise forest and climate policies.

4.3.1.6. Other societal groups. Representatives of the City of Helsinki were active in HS discourses (5 % of all discourses). Their discourses related mostly to urban planning, activities and plans made by city officials aiming to respond to the criticism that residents targeted at actions decreasing nearby forests and green areas in Helsinki. This is explained by HS’s geographic focus on the Helsinki metropolitan area in its reporting, even though the readership of HS is nationwide. The statements of Metsähallitus (4 % of all discourses) focused on the growing number of visitors to national parks and other recreational areas managed by Metsähallitus. Environmental NGOs highlighted the power and responsibilities of policymakers in local, national and EU-level politics (4 % of all discourses).

4.3.2. Shared discourses in HS

Key actors shared several discourses. Firstly, forests are of crucial and diversified importance for Finnish society and its actors. Secondly, there are various, often conflicting, needs and challenges related to forest and forest utilization, and politicians have the responsibility and power to offer solutions to change the situation. Thirdly, there should be more constructive, peaceful, and balanced societal discussion on forests, with consideration from various perspectives. Many of the analysed articles somehow touched upon two major issues related to forests: the role of forests mitigating climate change and/or their role in maintaining biodiversity. [quote HS14b] The actors were worried about the current state of the forest-related issues and brought up their views on sources, causes, consequences and potential solutions and actions for the problems. In most cases the discourses indicated conflicts between different actors and actor groups including expressions of unfair actions or unequal power relations between the actors. There was agreement among the actors that politicians are the most powerful actors.

4.3.3. Maaseudun tulevaisuus

The forest-based companies and their interest organization the Finnish Forest Industries Federation (Metsäteollisuus ry in Finnish) (categorized as a “market sector” actor) were the most active group, comprising 18 % of all discourses. The organization has defined as its goal “to ensure that Finland offers a competitive and innovative operating environment for forest industry production, employment, and investments” (Finnish Forest Industries, 2023). The Finnish Forest Industries Federation has 62 member companies in the pulp, paper, paperboard, and packaging industries as well as in the wood products industry (Finnish Forest Industries, 2023). The three biggest international pulp and paper companies in Finland – Metsä Group, Stora Enso, and UPM – are referred to as “large forest companies” in this study, and they formed the most uniform and distinctive discourse among the companies. In addition to these large companies, forest-based SMEs (companies larger than micro-enterprises of 1–10 employees) are included in the qualitative analysis. These companies formed a heterogeneous group of actors from different parts of the forest-based value chain – from forest fertilization and harvesting companies to biorefinery actors – with diverse discourses.

The actor group formed by the Finnish forest owners and their interest organization, the Central Union of Agricultural Producers and Forest Owners (MTK), which also represents farmers and other rural entrepreneurs in addition to forest owners, constitutes the second most notable actor group along with the politicians in the MT discussion (17

% of all discourses). As mentioned earlier, MTK is an owner of the subsidiary which publishes MT.

4.3.3.1. Forest-based companies and their interest organization Finnish Forest Industries: global industry players guarantee national welfare through domestic raw material. As representatives of the market category, the large companies’ hegemonic discourse was on their overall *financial position and future views on the markets*: successes and declines in their businesses including shutdowns and openings of facilities. Discourses on the emergence of the Covid-19 pandemic, and its effects and potential longer-term influences on the FBS were also abundant. These discourses were closely connected to the state and insecurities of the global pulp markets and related value chains. [quote MT62] The core role of the forest industry was highlighted in the national economy and wellbeing, especially during the pandemic. [quote MT86] Hegemonic, unidirectional rather than dialogical discourse targeted at the forest owners were concentrated on communicating about the *current wood raw material demands and prices of wood* or about *recommended management practices*, while at the same time highlighting the sustainability of their own actions. [quote MT118].

The role of Finnish Forest Industries was manifested as advocate, such as in the cases for a new forestry incentive scheme and PEFC and FSC certifications, and as a critic of both national and EU-level political proposals. These included the cases of the EU’s proposal of sustainable forest management as a climate target, and the preparation for Finnish environmental legislation, with the overall aim to promote a suitable business environment for the forest industries. [quote MT128] In those discussions that involved disagreement over forest use, the large companies themselves rarely participated. Altogether, the discourses of the companies concentrated mostly on their market situation and their wood demand. There were little discourses indicating conflicts except for statements related to change negotiations and strikes in the facilities.

The sawmills, whose discourses also formed a rather uniform storyline along with the three largest FBS firms’ discourses, concentrated on their financial position. Difficulties related to decreasing sales and competitiveness due to the global economic situation, oversupply of raw material due to pest damage in Central Europe, and the pandemic were the key issues. Sawmills, however, noted the poor functioning of the Finnish timber market, stating that large companies do not pay a fair price for pulpwood, which keeps the price of logs higher and in turn, has negative effects on sawmills and their competitiveness. [quote MT8] Altogether, the discourse of the large companies and Finnish Forest Industries present the industry as a provider of Finnish national welfare, whose struggles and challenges are independent from the industry itself. Their supposition often seems to be that, due to their key role in the national economy, other stakeholders, primarily forest owners, should provide the needed conditions and raw material for these powerful societal actors without mutual dialogue.

4.3.3.2. Forest owners and their interest organization MTK: Forest owners need support, not accusations. The hegemonic discussion created by the forest owners and MTK – both categorized as market sector representatives – was on the *harm caused by forest protection and conservation acts to forest owners*. The problems were indicated by both family forest owners, representatives of jointly owned forests and MTK. The key line of discussion was that the forest owners’ decision-making power about their own forest properties and related management and harvesting decisions are unfairly limited and regulated by the other societal actors. The forest owners’ views are not taken into consideration and the owners are not properly informed about the issues related to their forests. It was noted that protection and conservation cause income losses for forest owners which should be compensated. The main counterparties in these conflicts were usually environmental organizations, the Ministry of Environment, the Centre for Economic Development, Transport and the Environment, and certification organizations. [quotes

MT124, MT142] For example, MTK highlighted that in the preparation of a new national park, landowners were not invited to the preparation working group, which caused disagreements among forest owners. FSC certification and assigning forest lands as High Conservation Value (HCV) area attracted criticism not only due to inadequate informing of forest owners but also due to its potential effects on forest management practices and the timber trade. MTK saw dialogue as the best way to proceed with solving the challenges related to HCV implementation. [quote MT26] MTK also brought up the defects in the public climate discussion: the important role of forest owners and forest management in climate change mitigation are not understood and many societal actors lack related knowledge. This leads to the discussion where *forest owners and other rural actors are made guilty for nothing*. In terms of business potential, carbon sequestration was seen as a possibility to increase forest owners' income.

Supporting family-owned forestry and the related value chain was MTK's key agenda. In this context, the government, through subsidies and taxation, was the main actor to be affected and criticized. Especially, preventing institutional investors from getting too large a share of the forests was seen to be important due to their (sole) focus on economic benefits. The concept of intergenerational sustainability was introduced, referring to the ways of acting so that forests are left to the next generation in better condition than they were when they were received, as noted by MTK's chairman. Jointly owned forests were seen to increase this continuity, among the other highlighted benefits this ownership format can offer. [quote MT40].

MTK also introduced EU-level challenges and pointed out that in many of the EU's strategic papers, such as the Green Deal, bioeconomy and sustainable resources, such as wood, and their utilization have not been taken into a consideration. [quote MT76] However, as an exception to prevailing critical discussions of the EU, the first version of the proposal for reform of the EU's regulations on land use, land use change and forestry (LULUCF), which became public during the studied period, received a positive welcome due to the more simplified rules for carbon sequestration accounting. MTK's views were also supported by Finnish Forest Industries when they advanced their shared interests, such as in the case of preparation of environmental legislation. Both interest organizations blamed the Ministry of Environment for poor preparation of the proposal for law, and for not adequately taking into consideration different perspectives and their coordination. [quote MT159].

All in all, the perspectives and needs of the forest-owners were at the core of the discourses created by this actor group. The forest owners were often seen and presented as victims of unfair treatment whose voices are not heard or understood. The actors, despite highlighting the aims of the forest owners for multi-goal value creation, created and described confrontations between the environmental NGOs and forest owners as well as between the governmental actors and forest owners in forest conservation and protection issues. However, considering that forest owners' key business partners are most often the large companies, there were surprisingly few discourses related to relations between large forest companies and forest owners. Respectively, there were hardly any conflicts or critiques indicated between these actors except for a very few statements criticizing the low prices paid by the forest companies. In addition, it was mentioned that forest owners are not encouraged and educated by local forest management associations in continuous growing because it is less profitable for the forest industry.

4.3.3.3. Politicians: forest owners as the saviours and the spittoons. Among the state representatives, local-level political discussion was almost non-existent in MT. The national level discourses given the most space related to *advocating for Finnish forest owners and their forest management practices and income*. Members of the Centre Party, followed by those from the National Coalition Party, were the most dominant actors. Family forest owners were seen as core actors both securing national economy, also during the challenges of the Covid-19 pandemic,

and enabling climate change mitigation. It was highlighted that *despite their key role as caretakers of welfare and the responsible management of forests, they are the target of negative views and disputes* by the surrounding society, which, in turn, does not have enough knowledge on the forests, FBS and related practices. This situation was seen as unfair to forest owners: their capabilities should be relied on, and their income should be supported through legislation, taxation, and subsidies. The policy-makers highlighted the importance of societal discussion on forests and forest-based income, but without unrealistic and/or black-and-white thinking and deliberate confrontations. [quotes MT42, MT144, MT155] The discourses of the politicians also encompassed the idea of forest resource utilization in a manner that different forest-related demands and goals, in principle referring to the goals of environmental, economic, and social sustainability, are not exclusive to each other. These are in line with our previous study (Halonen et al., 2022), in which we analysed policy documents governing forest utilization and identified as the most striking, hegemonic discourse the *You can have it all (if you close your eyes)* discourse, which encloses the idea that competitive forest-based businesses supporting overall economic growth can be attained without ruining forest-related ecological or social values. Even though members of the Greens were the most critical of "you can have it all" thinking, there were statements supporting the view also among them, as indicated in the quote MT53, which further highlights the role and power of the state as the forest owner. [quote MT53].

Not surprisingly, there were power struggles and disagreements between different parties in many forest-related issues. In addition to the Greens' goals, the left-wing policy of the Social Democratic Party, the party of the prime minister during the study period, was also criticized. It is noteworthy that especially the criticism of the Social Democrats was often indicated through the chosen expressions of MT editors and journalists, rather than in direct comments from representatives of other parties. Forest conservation, except for some debates on (sustainable) harvesting quotas and climate impacts of reforestation and deforestation, were largely lacking.

In the EU-level issues, the hegemonic discourse was *Finland's unique, forerunner role and strong knowledge in forest management and utilization*. This was well aligned with the "You can have it all" discourse identified at the national level. It was seen as important to lobby Finland's views in forest-related issues and to keep decision-making power on forest management in Finland, while aiming to respond EU-level goals. There were worries that bioeconomy and forest industries are not supported enough in the EU policies, nor in the wider societal discussion. [quotes MT161, MT102a] The EU Forest strategy preparation, related negotiations, the content of the strategy and its steering impact on Finland, was given plenty of space in MT. The accepted forest strategy report – preparation led by the Finnish MEP, a representative of the Finnish National Coalition Party – was met with contentment both by the leading preparator himself as well as by many others. [quote MT102b] However, there were also disagreement among the Finnish MEPs on the content of the strategy. The Green Party, supported by MEPs from the Left Alliance, was critical of the content of the forest strategy report, and environmental sustainability was seen as being left out. [quote MT112] Contradictory to the worries on too narrow national power over the forest related issues, MEPs from the Greens indicated a need for a bigger role for the EU in national forests and the forest management of its member countries as a possible way to enhance forest conservation. [quote MT109].

Altogether, national-level political discourse in MT, led by the Centre Party, concentrated on advocating for and supporting Finnish forest owners. Not surprisingly, since the Centre Party has been traditionally supported among rural actors. In terms of the EU-level policies, the most distinct issues in the discussions were lobbying Finnish forest management and industries as well as keeping decision-making power on forests in national hands. The biggest political confrontations were with the Green Party, yet again not so surprisingly, since conservations goals

often influence the utilization of wood resources and harvestings.

4.3.3.4. Researchers, Finnish Climate Panel & IPCC: how much wood can be harvested? The dominant research actor in the discussion was the Natural Resources Institute (Luke), comprising 3 % of all discourses, with the hegemonic discourse on *knowledge related to harvesting potentials, forest management practices and some of their impacts* related mainly to carbon sequestration, including soil carbon and carbon storing forest-based products. [quote157] Luke's discourse on potential harvesting quotas concentrated on (sustainable) harvesting quotas in terms of wood production.

The discourses of other research organizations, such as universities, varied, including gender equality and the role of females in FBS, the significance of bioenergy, management of nearby nature and continuous growing. MT's choice of topics and interviewed experts was easily detected also in the researcher-initiated discussion: the presented perspectives often supported forest utilization and played down the negative impacts of harvestings. [quotes MT28, MT45] The discourse did not indicate any meaningful power contestations. Instead, it contained more reporting on the scientific knowledge on the topics that were chosen to be published in MT.

4.3.3.5. Editors and journalists: in the forest owners and livelihoods we trust (though society does not). "Maaseudun Tulevaisuus takes care of rural areas and incomes and looks after mental and economic wellbeing" – these are the stated goals of MT. The hegemonic discourse of editors and journalists were naturally aligned with these principles. The views of the editors were also well aligned with the views of MTK, which is not surprising when considering MTK's role as rural actors' interest organization and the owner of a subsidiary which publishes MT. Moreover, the close relationship between the MT and its readers – mainly rural actors – was highlighted. The views of the editors were also well aligned with the political perspectives of the Centre Party and the National Coalition Party. The Centre Party has traditionally been profiled as promoter of rural actors and livelihoods (Kellokumpu, 2022). The views of the editors on certain politicians, policy initiatives or decisions were strongly linked with how those viewed forest utilization. In practice, the Centre Party's support for forest owners and forest utilization were most often acknowledged by the editors whereas the Green Party and with the Social Democratic Party of the prime minister, along with their views – often those related to forest protection – were criticized. [quote MT11].

Altogether, the discourses of the editors and journalists focused on *defending and advocating for Finnish rural actors*, often presented as *the other societal actors vs. forest owners and farmers* type of setting. Lack of support and "proper" knowledge by the society on rural actors and their activities and achievements, especially in climate change mitigation and environmental protection, were seen as key conflicting issues. [quotes MT 46a, b, c].

4.3.4. Shared discussion in MT

In MT, the actors largely shared the single discussion on supporting Finnish forest owners who are underrated and blamed by the other societal actors despite their key role in mitigating climate change and providing raw material for the forest industry, which in turn guarantees national welfare. The most profound conflicts were indicated to exist with environmental NGOs and the Green Party whereas the Centre Party was a strong supporter of rural income. The large forest industry companies seem to expect that their powerful role in the national economy entitles them to set the rules for raw material providers, namely forest owners, which in turn do not criticize the companies.

In addition to above presented actors, citizens were also active in MT discourses (4 % of all discourses). Their discourses related mostly to forest-related income and management.

5. Concluding discussion

5.1. Actors and discourses of HS and MT present two separate world views

Forests have a range of importance and meanings for Finnish people. The significance of forest-based industries, the high number of private forest owners, diversified human–forest relationships and increasing needs to promote the sustainability transition create a society where forests are at the core of many discourses. There are many contradictory views, which are aggravated even further in the public discussion, which can be seen also by this study: forest utilization vs. protection, rural vs. urban actors, forest people such as forest owners, people in forest businesses, providers of national economy vs. so-called "forest people" such as hikers and conservationists.

The analysed articles introduced the diversity of forest-related actors, discourses, and relations between the actors, and demonstrated the historically deeply rooted yet constantly changing role of forests for Finnish society. However, the two newspapers in the analysis outline their own worldviews with their specific selection on topics and actors, and these are very divergent from each other in many ways. For a summary of the identified actors, actor-specific hegemonic discourses, shared discourses between the actors and power- and conflict-related issues, see Table 3.

In HS, forest-related policies and strategies, environmental sustainability – climate change in particular – as well as human recreation and wellbeing were the topics given the most space. Third-sector representatives, namely researchers, were the dominant actors in the discussions, creating hegemonic discourse for *Forests for climate*, followed by politicians as state representatives with their *Forests for saving and using* discourse, reflecting the most common article theme categories and topics. These findings are in line with the results of a recent Finnish media study on perspectives in forest reportage in HS (Wiio, 2024). HS articles looked at the forest-related phenomena from the individual and local levels: citizens discussed the significance of nearby urban forests for their wellbeing and inspiration, but then, global-level climate issues and the role of Finnish forests in the big picture of climate change mitigation were also highlighted. The main shared discourses of the HS actors highlighted the importance of the forests for the various societal actors, considering their diverse experiences, values and often conflicting needs in terms of forests and how they are utilized. HS actors also shared the need for more constructive and balanced societal discussion about forests. The actors agreed nearly unanimously that the politicians have the responsibility and power to offer solutions to change the situation.

In MT the dominant article theme category was business followed by policies category. Other important categories were environmental sustainability (climate change in particular), forest ownership and forest management related article categories. Aligned with this, market sector representatives, namely forest-based companies, and forest owners with their interest organizations dominated the discussion along with politicians. *Global industry players guarantee national welfare through domestic raw material, Forest owners need support, not accusations, and Forest owners as the saviours and the spittoons* respectively were their hegemonic discourses. The dominance of forestry sector and political actors (along with journalists) in forest-related public discussion has also been acknowledged by Mack et al. (2023), who studied forest discourses in the German media. In MT, the shared discussion among the main actors was focused nearly solely on supporting forest owners and industries. The articles centred upon on Finnish rural actors and areas and the global perspectives were part of the discourses only in relation to the global value chains of the large FBS companies and effects of EU-level politics on rural actors. MT actors indicated that the power struggles and conflicts are especially caused by environmental NGOs and the Green Party, but also by the rest of the society. Altogether, many of the articles included a setting of forest owners and/or forest-based business

Table 3

The table condenses the most active actors, sectors they represent, actor-specific hegemonic discourses, shared discourses between the actors, and power and conflict related issues which actors indicated in the studied newspapers.

<i>Helsingin Sanomat</i>					
actor group	sector	actor-specific hegemonic discourse	shared discourses between the actors	actors with power	actors causing conflicts
Researchers, IPPC and Finnish Climate Change Panel	third	Forests for climate	-forests are of crucial and diversified importance	politicians	politicians
Politicians	state	Forests for saving and using	-conflicting needs related to forests; politicians have responsibility and power to change the situation	forest owners, EU level politics	other political parties
Citizens	third	Forests for all	-need for more constructive societal discussion	politicians, to some extent shared between all the citizens	city officials, Metsähallitus (as the state representative)
Creative industry	market	Forests for art and inspiration		politicians	politicians
Editors and journalists	media	Forests need better policies		politicians, users of economic power	politicians, users of economic power
<i>Maaseudun Tulevaisuus</i>					
actor group	sector	actor-specific hegemonic discourse	shared discourses between the actors	actors with power	actors causing conflicts
Forest-based companies and their interest organization Finnish Forest Industries	market	Global industry players guarantee national welfare through domestic raw material	-forest owners and industries need to be supported	global markets, FBS companies themselves	–
Forest owners and their interest organization MTK	market	Forest owners need support, not accusations		the society excluding forest owners	the environmental NGOs and governmental actors vs. forest owners, the society
Politicians	state	Forest owners as the saviours and the spittoons		other parties than the Centre Party, EU-level politics	Green Party, EU, the society
Researchers, IPPC and Finnish Climate Change Panel	third	How much wood can be harvested?		?	?
Editors and journalists	media	In the forest owners and livelihoods, we trust (though the society does not)		the (ignorant) society excluding forest owners	Green Party, Social Democratic Party of Finland, society

actors vs. the rest of society.

It appears that forests per se were the origin and centre of many discourses in HS whereas the MT discourses originated from forest-owners and businesses needs instead of forests (see also Table 1, Table 2). The HS topics covered more diversified forest-related issues and perspectives compared to MT but overlooked most of the forest ownership issues. The research-based knowledge was more extensively utilized in HS than MT, where scientific discourses concentrated almost entirely on harvesting potentials and forest management practices. Interestingly, Ekayani et al. (2016), who studied the role of scientists in forest fire media discourse in Indonesia, found that stakeholders view researchers as a reliable source of information for the media, having the potential to affect the policy agenda, whereas the news media does not recognize and utilize scientific knowledge. This means there is minimal coverage of scientists' discourses in the media. In the case of MT, its reliability among non-rural actors might increase if the role of more varied scientific information would be more notable. In addition, in our view, the nuances and arguments in articles were more neutral and subtle in HS than in MT. This is understandable to a certain extent, when considering the role of MT as an advocate of rural issues and its connection to MTK (i.e., MTK is an owner of the subsidiary which publishes MT). The standpoint of HS, in turn, became more apparent through the choices of topics and perspectives and in more subtle expressions.

Overall, in many respects the key actors and their hegemonic discourses did not overlap with each other between the studied newspapers. Even though policies and politicians were viewed to have a significant role in both newspapers, and often with overlapping themes, the approach to the issues differed largely. These observations are not

surprising as such because the two newspapers we selected represent two different types of media. One concentrates on rural actors, forestry, and agriculture whereas the other one is general media read by a variety of societal actors. What is interesting from the perspective of this study, however, are how the depictions of, views on and relations to forests and their utilization presented in these media portray the heterogeneity, conflicts and extremities embedded in our current society. These representations give us material for analysing and understanding multi-actor processes and power contestations, as well as for reflecting on their impact on transition (see also Köhler et al., 2019). We believe that this type of polarization of discourses and views between the actor groups as detected in the newspapers can be also observed in the whole Finnish society at least to some extent. The differences in topics covered and the style of reporting on forest-related issues in these newspapers may also increase polarization instead of dialogue in society (see also Wiio, 2024). In addition, climate change was a cross-cutting theme through discourses and article categories in both newspapers and it was discussed from various perspectives. In a finding that aligned well with Mack et al.'s (2023) media study on German forest discourses, it appeared - that several actors aimed to instrumentalize forests through climate change discourses to legitimize their own views. In principle, the forests are valued from two opposing views: either based on the benefits they can bring to society or based on some inherent values. This type of phenomenon is well recognized in the transition literature. Garud and Gehman (2012, p. 980), for example, state that "sustainability actors can easily talk past one another" due to very different ontological assumptions on which actors base their views (see also, e.g., Rosenbloom, 2018; on competing storylines). The main opposing views of the forest discussion contain a great variety of views and understandings, but

constructing shared understandings in this setting remains a challenging task.

In the following sections, actor groups and their roles, relations – especially in terms of power – and conflicting views identified in the discourses are discussed and interpreted using premises from transition studies and CDA (as explained in sections 2 and 3.2.1). We point out the diverse power imbalances that indicated or hidden in the actors' discourses and identify obstacles for transition in the context of existing structures, aiming especially to reflect on how transition could be promoted.

5.2. Enabling or constraining transition

5.2.1. The role of politics in transitions: Can we really have it all?

Köhler et al. (2019) argue that transitions are inherently political processes: different actors and actor groups are not unanimous about desirable future states or ways to steer transition processes in a certain direction, and there are potentially winners and losers in the transition processes. Many actors are afraid of the transition outcomes, and especially incumbent actors might exercise power to resist transition. Therefore, public policy needs to have a key role in shaping the direction of transitions. As Meadowcroft, 2011, p. 71): “So typically, in the world of transitions, there is no escaping politics” and further, “State intervention and governance reform are essential”. Our findings are well aligned with these views. All the dominant HS actors, as well as many of the actors in MT, indicated the power and responsibility of politicians to steer the forest related transition processes.

According to our study, the policymakers in turn, put forest owners at the centre, highlighting their important role and power to impact the sustainability transition through their decisions and practices related to forests. However, Centre Party politicians, along with MTK, indicate the forest owners' lack of power over their property and income, blaming environmental NGOs and the Green Party in particular, but also the whole of society for interfering in forest-owners' businesses and property and, overall, for the lack of support and understanding shown to forest owners. This aptly depicts the complex power relations of actors. When interpreting outcomes from the perspective of MLP (Rip and Kemp, 1998; Geels, 2002), it is obvious that landscape-level political actors are not unanimous in their aspirations. Further, when applying a more nuanced exploration through MaP and a meta-theoretical framework for analysing power in change processes (Avelino and Wittmayer, 2016; Avelino, 2021), it can be seen that MTK and the Centre Party exert consensual power, aiming to empower forest owners while disempowering environmental NGOs and the Green Party.

The forests are the target of numerous goals and values, as indicated by this study and in many others. Politicians often try to offer promises encompassing the diverse needs of multiple societal actors, producing the discourse in this study *Forests for saving and using*, which aligns well with the *You can have it all (if you close your eyes)* discourse identified in the analysed forest-related policy documents in our earlier study (Halonen et al., 2022). The challenge is that the simplification of *We want everything* demanded by society cannot be met with *You can have it all* (or *Forests for saving and using*) discourses by the politicians. Again, as Meadowcroft, 2011, p. 72): “So a real (as opposed to a rhetorical) politics of sustainability implies hard choices”. The politicians should be able to set priorities, as well as to allocate resources for the long-term benefits- which cannot be optimal for all the societal actors. This often means that politicians need to exert their power in a way which enables certain actors while constraining others to reach their aims (Avelino, 2021). For example, bioeconomy, as presented by Befort (2020), can be viewed by politicians from a biotech-oriented or a biomass-oriented approach. The biotech-bioeconomy and the biomass-bioeconomy as sociotechnical regimes are based on very different logics: the first one views the bioeconomy as a biotechnology subsector and is thus technology driven, leaning on innovativeness, whereas in the latter one biomass transformation is a starting point and due to large volumes of

needed biomasses, raises the challenge of bioeconomy sustainability. This also means that political steering mechanisms and recommendations, depending on if the target of support is biotech-bioeconomy or the biomass-bioeconomy, needs to be different. Therefore, policy goals supporting overall bioeconomy can cause confusion and unintended outcomes if not carefully considered and prepared (see also Pender et al., 2024). Moreover, we would like to point out here that the results of this study show that bioeconomy as a term is not widely used in media discourses but in policy documents, political language and forest professionals it is more prevalent (e.g., Nähkö, 2019; Halonen et al., 2022). It appears that due to negative connotations related to forest-based bioeconomy (mainly because of its potential to have negative effects on environmental sustainability), and the decreasing “hype” around the bioeconomy experienced in many forestry countries, its usage has been decreased and replaced by, for example, discourses on circular (bio) economy (Ahola-Launonen and Kurki, 2022; Venkatesh, 2022; Eversberg et al., 2023) or resilient forest utilization (Hoeben et al., 2023). This has probably caused some deviation in policy and media language and discourses, which, in turn, might also strengthen misunderstandings and polarization between different actors in the societal forest discourse.

As Avelino (2021, p. 439) puts it, “with power and knowledge comes responsibility”. The responsible way of acting is not to promise, nor to demand everything. Rather, there is a need for more realistic and reasonable approaches with compromised solutions as an outcome of multi-actor dialogue. Accordingly, Takala et al. (2019, p. 11) closes their article on forest discourses in print media by stating the following: “It appears obvious that the social acceptance of the Finnish forest policy necessitates a more careful and genuine consideration of a multitude of objectives in the 2020s.” The unfeasible political promises and societal needs are criticized especially by environmental NGOs and the Green Party, but these discourses are not very distinct in the newspapers. Policymakers do have power and knowledge – or at least good resources to acquire to needed knowledge – and thus, an important role in promoting sufficiency economy (see, e.g., Vita et al., 2019; Zell-Ziegler et al., 2021 and further, the sustainability transition. This requires, however, more reasonable goals and realistic policies, and as highlighted many times, aligned efforts with other societal actors as well.

5.2.2. Role of the regime dominators vs. regime destabilizers in transition: What remains hidden?

As described in the introduction, the sustainable use of forest resources and aims for higher value-added production with fewer environmental impacts are widely agreed goals in Finnish society. Based on these endeavours, two particular issues or rather, the lack of them, in the discourses, caught our attention. The forest industry companies were not active actors in the HS discussion. In MT, their discourses were related to overall financial position and future views on the markets. Second, the forest industries were criticized very little, if at all, among the identified dominant actors. These observations lead us to consider the inertia of sociotechnical systems and the stability of the Finnish forest-based regime, which is dominated by large forest companies: What are the regime features and actors' abilities and relations which maintain this system? When do regime rules become rigid and problematic enough that the regime will be transformed? Who could be the potential active actors in this? Which actors belonging to regime do not share the dominant orientations? What type of power dynamics and contestations are related to these?

The unidirectional rather than dialogical discourse of large forest companies targeted at the forest owners were mostly about communicating the current demands for wood raw material and the prices of wood or on recommended management practices, while at the same time highlighting the sustainability of their own actions. The forest industry companies seem to expect that their longstanding key role in the national economy entitles them to set the rules for raw material providers, namely forest owners and their interest organization MTK, from whom there is little critique of the status quo. Due to this lack of critique

– differing views were brought up only by some sawmills, journalists and large-scale forest owners – Finnish forest industry companies can take a rather passive role in the debates. In terms of the power dynamics, there exists mutual dependence between large companies and forest owners, namely, the companies need raw material from forest owners and forest owners need purchasers for their wood. However, it appears that forest companies have more power over forest owners than vice versa (see [Avelino, 2021](#)).

Why do MTK and the forest owners remain rather silent? One of the reasons can be that for many forest-owners, forestry is no longer their main income. Urban forest owners get their income from their main occupations and for the rural forest owners' forest-based income is only one part of their livelihoods ([Laakkonen et al., 2019](#)). This means that many forest-owners might not have the motivation to interfere in the situation in a more in-depth manner. It also needs to be remembered that not all forest owners in Finland are members of MTK, which currently has approximately 280,000 members ([MTK, 2023](#)). Thus, MTK does not represent the majority of around 620,000 of the forest-owners ([Kulju et al., 2023](#)). There is not much information available on the views of non-member forest owners, and it is possible that they do not share the strategic views of MTK. These “hidden” perspectives, if realized to action, can potentially impact regime stability. In addition, it might be that forest owners do not have enough knowledge on alternative management options and business models which could better support sustainability goals. We suggest that increased knowledge among the forest owners could be an instrument for enabling change (see [Avelino, 2021](#)). Accordingly, [Bjärstig and Kvastegård \(2016\)](#) found in their study on forest social values in Sweden that private forest owners called for increased support, information, and advice on how to enhance forest-related social values. They also suggested the forest owner's association (Swedish Forest Agency) could take a more active role in the coordination and dissemination of knowledge. Related to this, MTK as an interest organization (along with regional forest management associations) could have a role in spreading the knowledge. However, it appears that MTK has positioned itself in a rather traditional role of supporting traditional forest management actors and practices as well as criticizing forest protection and conservation acts, and potential harm caused by those to forest owners. Alternative perspectives and new ways which could better support both environmental and economic goals of forestry and forest-based businesses – overall promoting the sustainability transition – are largely lacking. One perspective that also deserves to be mentioned is that forest owners might also avoid open critiques of forest companies because – after all – they need purchasers for their wood (see the discussion above on mutual dependence). Sawmills, despite acting as buyers as well, have rather limited purchase capacities. Altogether, this indicates that actors which could potentially be very powerful in changing existing forest-based system and power relations in it, namely forest-based companies, MTK and forest owners, hold to existing structures and roles, more or less willingly or consciously, or also take existing structures as given or unchangeable.

One of the challenges in destabilizing the Finnish forest regime is that forest-based niche firms are a very diverse group of actors which, despite how they all utilize forests and forest-based material, differ in terms of their technologies, products and markets. Many of these companies are careful to protect their innovations and new business models. This means that their willingness for collaboration is often limited, and they do not compose a unified niche which could, through collaborative effort, effectively transform the current regime dominated by large, mature forest-based companies (see, e.g., [Henttonen and Lehtimäki, 2017](#); [Kuhmonen et al., 2024](#)). However, it would be important to look for the collaboration potential among these companies, both in terms of promoting their own businesses as well as regime renewal. There is also interesting new business potential at the interfaces of the FBS and other sectors such as the chemical or food industry. Novel business branches such as the carbon capture and storage industry are also emerging (e.g., [Gabrielli et al., 2020](#)). These new businesses and collaborations have

great potential for changing the status quo in the forest-based regime. In terms of the power dynamics, these niche-level and novel businesses have many mutually exclusive goals, which hinder their willingness to collaborate. Despite these, they also could have collective goals and efforts in practices which do not require sharing details on their key competitive resources and capabilities ([Kuhmonen et al., 2024](#)). This would enable them to create collective, consensual, and more centred power over large companies in the regime (see [Avelino, 2021](#)).

In addition, it needs to be noted that the actor group with (likely) opposing views towards forest industries, namely environmental NGOs, was not active in the discussion. However, this is also dependent on the choices and power of media actors (editors, journalists), namely, to whom and which discourses they give space in the newspapers (as discussed in section 3.4). In other words, opposing views might be missing due to decisions of the media we selected for study. The findings from research on forest discourses in the German media indicated that despite the low standing of nature conservationists in the debate (i.e., they represent a minor percentage of the statements made), the polarization between nature conservationists and the forestry sector is obvious, with conservationists blaming forestry sector ([Mack et al., 2023](#)). Moreover, [Park and Kleinschmit \(2016\)](#) highlight in their study on forest conservation reporting by global media that journalists are in a key position in both framing different problems and acting as a gatekeeper that decides on the visibility of other actors in the media.

According to [Avelino \(2021\)](#), two interpretations of structural power prevail in the social sciences: structural power can be seen either as an object of social change or as a constraint for change. In the case of the Finnish FBS and its actors, structural power currently creates a constraint for change, more than being the object of change, and thereby mitigates the transition. Furthermore, this study found that discussion on power relations is almost non-existent, despite the power of politicians, not only in the analysed newspapers but also more widely in Finnish society. Again, we can ask, why are these types of discourses lacking? There is no simple answer to this. The view that would deserve more consideration is that there has traditionally been a high confidence towards institutions and government in Finland. Related to this, Finnish societal actors tend to outsource agency, instead of active participation ([Lähteenmäki-Smith and Manu, 2022](#)). However, in order to change to take place, top-down regulation and power mechanisms are not adequate, instead active citizenship would be required.

5.2.3. *Interplay of the complex system elements: Facilitating consolidation*

Ultimately, this study aims to produce knowledge which can promote the sustainability transition. From our slightly idealistic perspective, when societal actors, embedded in a complex system with numerous intertwined elements and dynamic relations, have a better understanding of each other's views, they are able to align their efforts and goals better for the common good and shared values (see also, e.g., [Fünfschilling and Truffer, 2016](#)). We believe that the findings of this study can, by conceptualizing actors, their roles and views (see also [Wittmayer et al., 2017](#)), create knowledge for initiating more fruitful discussions.

Politicians have their own complex relations and power dynamics as representatives of the state (landscape-level actors according to MLP), and despite their highlighted powerful role, they cannot enable transitions alone. Market sector actors, namely large forest companies, forest owners and MTK as the interest organization (composing regime) seem to hold in existing structures whereas community actors with their various views and often their “lonely warrior” roles, and third sector environmental NGOs as raisers of defects (viewed as niche actors) need more coherent and combined efforts as well as support from other societal actors in order to destabilize current structures and affect transition. This setting identified in the study follows well the principles of MLP: transitions require emerging niche-level innovations, landscape-level changes to create pressure on the regime, and the instability of regimes to give opportunities to niche innovations ([Geels and Schot,](#)

2007). However, as discussed in section 2, many critical reviews of transition studies have suggested that often gradual and endogenous processes within a sociotechnical system have a significant role in transition and should be studied more carefully. Related to this, the role of human actors would also require more in-depth analysis in transitions. In line with these suggestions, our findings indicate that beyond the well-recognized societal levels and related actors with their transition roles, there are more hidden actors, social roles, discourses and power relations which are not visible in the public discussions and newspapers. We believe that this underlying knowledge and ideology, if they become more clearly heard and visible, can lead to transformations in power dynamics, and further promote change in the current socio-technical system (see Avelino, 2021). We identified in our data, as well as in the other current Finnish societal discussion, many weak as well as stronger signals on societal actors seeking ways and spaces for more constructive discourses and creating shared understandings. Our study also hinted at the direction of consensus between the actors in many perspectives, seemingly hidden under adverse issues.

A WEEK ago, I attended a seminar at Finlandia Hall about a new approach to forest management, continuous cover forestry. The seminar was jointly organized by WWF, Stora Enso and the continuous cover forestry association Silva. Speakers included top experts from universities, the Natural Resources Institute Finland and forest companies. There were many matters of disagreement, but they were discussed in a calm and constructive manner. It felt very Finnish. Here, the people from MTK and WWF have to be able to fit into the same auditorium.

quote HS17b, HS journalist.

What is sure is that in order for transition to occur, various power structures and relations of actors need to be explored more in detail and discussed more openly. For example, what could be the actions to deconstruct centralized power structures and how (seemingly) disempowered actors could be empowered (see also Avelino, 2021). Encouraging and empowering these invisible and silent actors, such as non-MTK forest-owners, new business entrants, and layman, to become more active would be crucial as would establishing open platforms for sharing views between a variety of societal stakeholders in a respectful atmosphere. Lately, there have already been open discussion forums and openings for funding programmes to facilitate the development of multi-voiced discussions, such as Kone Foundation's *Metsän puolella* ("In the Woods") programme and the political dialogues series seminars of the Finnish Society for Environmental Social Science.

Overall, our recommendation for future research is to emphasize the roles and relations of diverse societal actors – power relations in particular – when studying the sustainability transition, not only in the context of the forest-based sector but in other sectors as well. We also recommend paying attention not only to the most obvious and outspoken actors and high-profile changes, but also to gradual changes and less visible citizens, communities and niche actors. Therefore, transdisciplinary studies and new research approaches are needed for understanding complex societal systems. For example, it would be important to explore the potential of diverse physical and digital platforms, their establishment, and stakeholder dialogue and relations within these forums. Forest-related research from outside the traditional forest sciences tradition, such as human–forest relationship studies (Halla et al., 2023), which explore the needs, values and behaviours of different forest-related actors, would require more attention in future, potentially shedding light on hidden issues. In addition, the choices and power of media actors (i.e. to whom and which discourses they give space in media channels) influence the transition, but these issues remain an understudied topic.

This study theoretically contributes to the literature on sustainability transitions. It strengthens the supposition of transition studies that the involvement of multiple societal actors is needed for structural change to take place. Furthermore, our study indicates that actors and their relations – the power of politics and regime dominators in particular – play an important role in the overall picture, yet less visible actors can

potentially create collective and more centred power over more dominant actors. Importantly, this study presents novel perspectives as well as reasons for polarization and disagreement over the forests and their utilization in Finland, while also offering potential solutions to mitigate these challenges. This knowledge can be useful for other countries and natural resources–based sectors as well.

The following verse authored by Anja Erämaja can be interpreted, understood, and felt in various ways – just like there are and will continue to be a diversity of understandings regarding Finnish forests and how they should be utilized. And that is fine. What is needed, however, is a more constructive, many-voiced societal dialogue to reach and reconcile our goals collaboratively without forgetting the most ultimate one: we need to sustain our forests to sustain ourselves.

I got off near the forest. I saw a live hare, just an ordinary one. It gave me a feeling of beauty and sadness, like we're still on the same side of history here.

quote HS86, poet Anja Erämaja.

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CRedit authorship contribution statement

Annukka Näyhä: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Venla Wallius:** Writing – review & editing, Visualization, Investigation, Formal analysis, Data curation.

Declaration of competing interest

All authors acknowledge that the material presented in this manuscript has not been previously published, except in abstract form, nor is it simultaneously under consideration by any other journal.

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Data availability

The authors do not have permission to share data.

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Appendices A-E. Supplementary data

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