

Sveriges lantbruksuniversitet Swedish University of Agricultural Sciences

Faculty of Natural Resources and Agricultural Sciences

Stories from the forest

 An analysis of the discursive framing of forest-based bioeconomy from the perspective of Forest Owners
 Associations and private forest owners in Sweden

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- An analysis of the discursive framing of forest-based bioeconomy from the perspective of Forest Owners Associations and private forest owners in Sweden

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Abstract

In recent years, the concept of bioeconomy has evolved as an alternative to the fossil-based economy of today, providing a vision of an economy based on renewable resources. In Sweden, the concept has been adopted by dominant stakeholders in the forest industry, where the forest is identified as an important renewable resource and a mean to mitigate carbon dioxide. The aim of this study is to examine the discourse upheld by the major Forest Owners Associations in Sweden and to explore the perspectives of private forest owners. By using Hajer's argumentative approach, text material from the websites of the FOAs is analyzed together with interviews with eight forest owners. The study finds that the FOAs represents a perspective on the bioeconomy where productive forestry and climate mitigation is in focus while social and environmental aspects are largely neglected. The forest owners are shown to put more emphasis on social and environmental sustainability in their forestry, hence partly rejecting the discourse that the FOAs upholds.

Keywords: bioeconomy, discourse coalitions, forestry, storylines, Sweden



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1 Introduction

In recent years, the capacity of the forest to contribute to climate change adaptation and mitigation has been increasingly emphasized (Holmgren, 2015). While there are different ideas on how forests are best managed and used to capture and hold carbon and replace non-renewable materials, most actors in the forest sector are recognizing that the forest plays a role in tackling climate change. Climate change mitigation relates to the concept of bioeconomy, where the role of renewable natural resources in the economy are in focus (Pülzl, Kleinschmit, and Arts 2014; Bugge, Hansen, and Klitkou 2016). Formas (2012) defines bioeconomy as

a transition from an economy that to a large extent has been based on fossil fuels to a more resource efficient economy based on renewable raw materials that are produced through the sustainable use of ecosystem services from land and water (Formas, 2012, p. 16) (my translation).

However, the concept tends to be assigned slightly different meanings by different actors (Staffas, Gustavsson and McCormick, 2013; Bugge, Hansen, and Klitkou, 2016).

The concept of bioeconomy has become more in recent years and have influenced EU policy as well as national policy in several European countries (Pfau et al, 2014; Kröger and Raito, 2016; Hausknost et al. 2017; Ramcilovic-Suominen and Pülzl, 2018). Furthermore, a wider range of actors are using the concept to communicate the role of renewable resources in the economy (Fischer et al, 2020). While the bioeconomy concept is often linked to sustainability, the extent to which the bioeconomy is combinable with sustainability and what this relationship actually implies is contested (Pfau et al, 2014; Hausknost et al. 2017; Ramcilovic-Suominen and Pülzl, 2018). The vagueness of the concept has motivated several researchers to examine how the concept is understood in different settings.

In the Swedish context several actors in the forest sector, both public and private, have adopted the concept of bioeconomy. Fischer, Stenius and Holmberg (2020) have studied the use of the concept in the Swedish adaptation of the internationally agreed upon tool for sustainable forest management, the National Forest Program (NFP). There are however reasons to explore how the bioeconomy is viewed by other stakeholders within the forestry sector in Sweden.

The share of privately owned forest in Sweden is large. About half of the forest in the country is owned by individuals (Nilsson et al, 2019). About a third of the private forest owners are part of one of the major forest owner associations (FOAs), organizations representing forest owners (LRF, 2014).

Due to their tenure, the private forest owners constitute an important group within the forest sector in Sweden. Their decisions about the management of their forests will affect the forest-based bioeconomy at large.

To understand the emerging concept of bioeconomy, the establishment of the concept in policy processes and in social groups can be studied discursively. By examining the language use—how issues are problematized and which actors and actions that are included and excluded—we can understand the discourse (Hajer, 1995, 2009). With the motivation that private forest owners manage a large part of Swedish forests, and will be an important actor group in determining how Swedish forests are used in a bioeconomy, this essay investigates if and in what ways private forest owners align with the discourse of a bioeconomy that dominates the forest sector and what role the membership in a FOA have for their position.

2 Aim and research questions

The overarching aim of the thesis is to map the forest-based bioeconomy discourse reproduced by the major Swedish FOAs and how forest management is discursively framed in the context of bioeconomy. I aim to study it from the perspective of private forest owners, to see to what extent and on what aspects the discourse is hegemonic or challenged by these.

The following four research questions will guide the analysis:

- 1) How is the forest-based bioeconomy framed in the discourse represented by the FOAs and how is this supported, challenged or framed differently by individual forest owners?
- 2) In what aspects are the forest-based bioeconomy discourse hegemonic and where are clear challenges to the discourse from the voices of private forest owners?
- 3) How is the balance between social, economic, and environmental dimensions of sustainability represented in the forest-based bioeconomy discourse and is this supported, challenged, or framed alternatively by individual forest owners?
- 4) Does membership in a FOA affect the private forest owner's framing of the forest-based bioeconomy?

3 Background

3.1 The Swedish forest sector

Almost seventy percent of Sweden is covered by forest (SCB, 2019) out of which about 84% is productive forest (Christiansen, 2014). About 50 % of the forest in Sweden is privately owned, while 24 % is owned by private-owned limited liability companies and 13 % is owned by state-owned limited liability companies (Skogsstyrelsen, 2018). Forests have long been, and still are, a key resource in Sweden. The Swedish forest industry is an important industry in Sweden, creating many jobs and export revenue. The Swedish government has a strong involvement in the Swedish forest sector including production-oriented legislation, state owned forest companies, subsidies, infrastructure and research (Fischer, Stenius & Holmgren, 2020). While the state is deeply involved in the Swedish forestry sector, there is a long tradition of independent private forest owners with significant freedom to manage their forests (Siskonen, 2013).

3.1.1 Forest Owner Associations

The history of the FOAs in Sweden begins at the start of the twentieth century and the associations have had an great impact on the development of the Swedish forestry of today (LRF, 2020). There are four major FOAs in Sweden—Norra Skogsägarna (the Northern Forest Owners), Norrskog (North Forest), Mellanskog (Middle Forest) and Södra Skogsägarna (the Southern Forest Owners) (Skogskunskap, 2019; English translation of organization names by author). These four FOAs are linked through The Federation of Swedish Farmers (LRF) which is a trade organization that also represents the FOAs politically. The FOAs are owned by their members and function as the link between the forest owners and the forest industry (Skogskunskap, 2019). In practice this means that the FOAs can be hired by the forest owner to sell wood either to third parties or to subsidiaries of the FOA. The FOAs also assist their members with forestry services, consultancy, and training. The consultancy and training offered by the FOAs are focused on the different management activities implemented within conventional forestry (Mellanskog, 2019). Since the FOAs are member owned organizations, it is consequently the members that decide who represents the associations by voting at annual meetings (Skogskunskap, 2019). Out of all private forest owners in Sweden, about a third are members of one of these four FOAs (Skogskunskap, 2019). There are a few other FOAs in addition to these four largest, but in this essay the focus will be on these four organizations.

3.1.2 Forest management in Sweden

Even-aged forestry is the most common forestry in Sweden and is also what has been the target of forest policy since the 1950s (KSLA, 2015). This model is a cyclic system where areas are clear cut when the trees have reached a certain age, and regenerated either by planting, sowing or from natural regeneration. In the period between regeneration and felling, the forest is maintained by cleaning and logging. While most of the planting is carried out manually (often by migrant seasonal labor), the majority of the forest management in Sweden is entirely mechanized and requires advanced forest machines. The dominating species in the productive forest are pine and spruce, pine makes up 38 % of the productive forest area, spruce 27 % and the rest consist of areas with mixed tree species and deciduous forest.

Although the even-aged forestry is the conventional method of forestry in Sweden, it should be mentioned that there are other methods of forest management (Skogsstyrelsen, 2018). There are forest owners that choose to focus on other species than the dominating coniferous forest for various reasons and there are also alternative forest management methods that some actors advocate. One example is continuous cover forestry which is a method of forestry where the forest area is never left clear cut, instead trees are taken out regularly while letting other trees stand (Skogsstyrelsen, 2018). Continuous cover forestry is commonly viewed as a way to sustain a forest covered landscape for social or ecological reasons (Skogsstyrelsen, 2018).

Although the conventional forest management method described in previously is the dominating practice of forestry in Sweden, there is no law specifically stating how forest owners should manage their forest (Skogsstyrelsen, 2017). The present Forestry Act, established in 1993, has few binding laws that oblige the forest owners to care for their forest in a specific way (Appelstrand, 2007). The previous Forest Act from 1979 had a larger focus on production, containing more rules on how forests should be managed to maximize production while ensuring regeneration of the forest (Skogskunskap, 2017). One example of the changes in the Forestry Act of today (from 1993) and the previous Forestry Act (from 1979) is forest management strategy. According to the Forestry Act from 1979, forest owners are required to establish a forest management strategy where the management of the forest could be monitored by the authorities (ibid). In the Forestry Act of 1993, the forest management strategy is presented as a tool for the forest owners for forest management. The forest owners are expected to independently make sure that environmental and social aspects of forestry are considered (Appelstrand, 2007). An illustration of this principle is that the Forestry Act states that all forest harvested in Sweden should be replaced by new trees (Skogsstyrelsen, 2017). There is however no

specific regulation that states in what way the forest owners should implement this, it is up to the forest owners themselves to decide to plant new trees or rely on natural regeneration (ibid).

There are forest areas that separated from productive forestry in order to protect the natural environment (Skogsstyrelsen, 2018). It is the Swedish Forest Agency that decides if a forest area should be protected and there are different forms of protection. Some types of protection warrant that the forest owners are economically compensated by the state, where others are voluntarily protected by the forest owner (Skogsstyrelsen, 2018).

Voluntary protection of forest areas are primarily implemented within the framework of standards. Forest products can be certified using standards issued by the Forest Stewardship Council (FSC) and Programme for the Endorsement of Forest Certification (PEFC), where one of the requirements are that part of the forest area is preserved (FSC, Nd). Appelstrand (2007) writes that these certifications can be viewed as a result of a forestry law with few binding regulations.

3.1.3 The forest products industry in Sweden

The major types of products manufactured from Swedish forest are pulp, paper, and sawn-wood products (KSLA, 2015). The Swedish forestry industry is an export focused sector, about 90 percent of pulp and paper and close to 75 % of sawn-wood products are exported (Ibid).

3.2 Sustainability within the Swedish forest sector

Sustainability has increasingly been recognized within forestry since the 1990s, when the social and environmental aspects of the forest started to influence forestry policy (Wiersum, 1995). The Swedish Forestry Act from 1993 is an example of this, it states that production aspects and environmental aspects should be of equal importance (Swedish Gov. Bill 1992/93:226). This poses a shift from the previous Forestry Act of 1979 that were focused on production (Appelstrand, 2007).

It is the Swedish Forestry Act together with the Swedish Environmental Code that stipulates the laws of Swedish Forestry (Skogsstyrelsen, 2019). These laws concern how the forest should be managed in terms of felling, care for nature and social values, consideration for reindeer herding and the management of pests. However, the laws in the Forestry Act and the Swedish Environmental Code are primarily expressed as goals for forestry, rather than specific requirements of how the forest should be managed, which gives forest owners freedom to make their own choices (Appelstrand, 2007). In addition to laws, the forestry in Sweden are guided by goals set up by the Swedish Parliament, goals that are not command-and-control regulations (Appelstrand, 2007). The forest owners are seen to have a considerable amount of freedom in the management of their forests

(Appelstrand, 2007). The lack of regulations in the forestry has given name to the concept of 'freedom with responsibility' which is commonly used within the forestry sector (Appelstrand 2007)

Several researchers argue that the economic, social, and environmental aspects of sustainability still does not hold an equal role to production interests in Swedish forestry. Staffas, Gustavsson and McCormick (2013), Beland Lindahl et al (2016), Hausknost et al (2017) and Fischer, Stenius and Holmgren (2020) argue that despite the ambition to address different aspects of sustainability within the forestry sector, that the regulations in place are weak, leaving the economic sustainability as the main priority. A conclusion that can be drawn from this is that there is a need for broad public debate on how sustainability should be implemented in practice (Beland et al, 2015).

Johansson (2016) describes the Swedish forestry policy as consensus oriented, where the stakeholders are encouraged to manage their forest in a way that complies with both the production goals and the environmental goals described in the Swedish Forestry Act, but with few enforcable regulations. The question of what implications such consensus-oriented culture has for the management of the forest has been discussed in several studies (Johansson, 2016; Fischer, Stenius and Holmgren, 2020). Fischer, Stenius and Holmgren (2020) questions the legitimacy of the focus on consensus in the National forest program; they argue that the term is used to enforce unity around a common story, rather than giving room for an open discussion.

3.3 The bioeconomy

While the concept of bioeconomy has been defined in different ways, a common denominator is the focus on decoupling the economy from non-renewable resources (Staffas, Gustavsson and McCormick 2013; Bugge, Hansen, and Klitkou, 2016; Hausknost et al. 2017; Fischer, Stenius and Holmgren, 2020).

The concept has been increasingly used in recent years to address different issues in a wide variety of questions (Pfau et al, 2014; Kröger and Raito, 2016; Hausknost et al. 2017; Ramcilovic-Suominen and Pülzl, 2018). While the concept in some parts has been used to emphasize the possibilities of biotechnology, the focus in the European setting is largely on the concept of a bioresource-centred bioeconomy. This implies that the focus is on the biological raw material and the potential to develop the industry and refine value chains based on renewable resources (Staffas, Gustavsson and McCormick 2013; Bugge, Hansen, and Klitkou 2016; Hausknost et al., 2017; Fischer, Stenius and Holmberg, 2020). The concept has been influential in recent European Union (EU) strategies, where a bioeconomy strategy was launched in 2012 (Hausknost et al. 2017; Ramcilovic-Suominen and Pülzl, 2018).

In Sweden, the report *Swedish Research and Innovation Strategy for a Bio-Based Economy* was developed on request from the Swedish government, also in the year of 2012, and gives a picture of bioeconomy in the Swedish context (Hausknost et al. 2017). The report is building on the same understanding of the concept and with similar motivations as the EU strategy (Bugge, Hansen, and Klitkou 2016). The report defines bioeconomy in the following way:

The conversion to a bio-based economy means a transition from an economy that to a large extent has been based on fossil fuels to a more resource efficient economy based on renewable raw materials that are produced through the sustainable use of ecosystem services from land and water. (Swedish Energy Agency et al. 2012, p. 16) (my translation)

Several actors in the Swedish forest sector, both authorities and companies, have adopted the concept of forest-based bioeconomy. The concept has been central in the strategy for the National Forest Program as showed by Fischer, Stenius and Holmgren (2020) and it is also adopted by stakeholders in the Swedish forest industry, such as the umbrella organization the Swedish Forest Industries (Svenska Skogsindustrierna, Nd). Fischer, Stenius and Holmgren (2020) suggests that the industry and state constitute a group of actors that share a common understanding of the concept of bioeconomy.

In the EU strategy for bioeconomy, the bioeconomy is presented as an overarching opportunity to address a variety of issues in different sectors (Ramcilovic-Suominen and Pülzl, 2018). It is portrayed to be of benefit for creating economic growth and bettering the national economy, as well as providing jobs, often in rural and peripheral areas (Bugge, Hansen, and Klitkou 2016; Kröger and Raito, 2016). The introduction of the bioeconomy is also motivated by the need to address the issue of limited resources and environmental problems related to resource use (Bugge, Hansen, and Klitkou 2016; Staffas, Gustavsson and McCormick 2013; Pfau et al, 2014). In the European bioresource-centred bioeconomy approach, there is a vision of new products and a more efficient use of the resources available. The EU strategy on bioeconomy

contains different objectives in terms of a focus on reducing waste-streams of bio-resources on the one hand, and developing new products and economic value chains based on existing waste-streams from bio-resources on the other (Bugge, Hansen, and Klitkou 2016, p. 13).

Although the concept of the bioeconomy often is linked to sustainability, this is problematized by several researchers (Pfau et al. 2014; Krüger and Raitio 2017; Ramcilovic-Suominen and Pülzl 2018; Vivien et al. 2019). Among others, Birch (2006), Krüger and Raitio (2017), Vivien et al. (2019) point

out that the link between bioeconomy and sustainability is not very strong and that there often are other reasons behind the promotion of the bioeconomy. Ramcilovic-Suominen and Pülzl (2018) further argues that environmental issues are only indirectly addressed. Instead the polices are focused at strengthening production and sectors, a perception that is confirmed by several other researchers, including Staffas, Gustavsson and McCormick (2013), Pfau et al. (2014), Bugge, Hansen, and Klitkou (2016), Kröger and Raito (2016) and Hausknost et al. (2017). Furthermore, sustainability is generally not clearly defined in the bioeconomy context which makes implementation and control ineffective (Bugge, Hansen, and Klitkou 2016; Ramcilovic-Suominen and Pülzl, 2018).

Moreover, several researchers opine that also the social aspects of the bioeconomy are largely downplayed in the EU setting, in favor for a focus on production (Bugge, Hansen, and Klitkou 2016; Ramcilovic-Suominen and Pülzl, 2018)

Similarly, Hausknost et al. (2017) argues that although the Swedish policies appear to have ambitious goals of reducing carbon dioxide emissions and of using resources in a sustainable way, there are few concrete propositions for achieving such goals. Furthermore, Staffas, Gustavsson and McCormick (2013) claims that even though Sweden acknowledges a global responsibility for the climate issue in their policies for bioeconomy, it is the economic aspects of bioeconomy that are in focus. Hence, there is a critique that environmental and social sustainability is downplayed in favor for the reinforcement of production, also in the Swedish context.

In conclusion, there are different approaches to the concept of bioeconomy, where the stakeholders view the role of the forest differently (Hausknost et al. 2017). While some see the forest-bioeconomy as a means to achieve a sustainable future, others consider it to be a threat to the very same (Pfau et al. 2014; Hausknost et al. 2017).

4 Theory – Concepts and analytical tools

This essay builds on a social constructionism approach. Social constructionism is a theory formation that includes several different theories within social science (Jørgensen & Phillips, 2000). However, the common ground for the social constructionism approaches is that they reject the notion of an objective truth. Rather, the idea is that our perception and knowledge is affected by cultural and historical factors and that meaning are created through social interaction with others (Creswell, 2018). Social processes can both maintain and change our perception of the world and is what determines our concrete actions. Consequently, the way that people understand the world is also translated into practical and social consequences for society (i.e. the world is socially constructed). It is in the light of this, this essay aims to explore the constructions of the forest-based bioeconomy held by FOAs respectively private forest owners through discourse analysis.

4.1 Discourse analysis

Discourse analysis is one way to analyze social phenomena from a social constructionist perspective. Different scholars define discourse in different ways, which in turn affects how the theory is applied. A common ground for discourse theory is the assumption that "our ways of talking do not neutrally reflect our world, identities and social relations but, rather, play an active role in creating and changing them" Jørgensen & Phillips,(2000, p. 7).

Based on the premises set by Foucault (Fairclough & Wodak, 1997) discourse is in this study understood as dialectical. That is, discourse does not only create meaning but it is also situated and therefore it also depends on the external situation. This means that I take the approach that not everything is discourse but that discourse constitutes the social, conceptual or ideological dimension of society, that interacts with, but is separated from the material non-discursive dimension in the form of e.g. forests, machines, buildings that also shape our world. Furthermore, this means that social structure contains both discursive and non-discursive elements, something that is also assumed by Hajer (2009).

Hajer (2009) defines discourse as "an ensemble of notions, ideas, concepts, and categorizations through which meaning is ascribed to social and physical phenomena, and that is produced in and reproduces in turn an identifiable set of practices" (Hajer 2009, p. 60). He continues by stating that one of the fundamentals of discourse analysis is that language shapes how we view the world and how we see our reality, and that it is not just describing it (Hajer, 2006). This implies that the way

that different actors describe the world, or a certain phenomenon can actually affect the practices around it through the way we express ourselves in communication with others. Depending on the extent to which a certain perspective is reinforced, it becomes more or less influential. If a discourse becomes dominant in a particular social group, this is what Hajer (2009, p. 64) refers to as a discourse structuration. Furthermore, if the discourse develops into institutions or the practice of an organization this is called a discourse institutionalization (Hajer, 2009, p.64). In the context of forest-based bioeconomy, these are useful concepts for understanding how forest management is framed differently by different actor groups and how particular framings come to dominate in certain institutional settings.

4.2 Argumentative approach

In order to explore the discourse upheld by different actors, Hajer's (1995, 2009) argumentative approach will be used. The argumentative approach is focused around the comprehension of discursive interaction as a process where new meanings and identities can be created (Hajer, 1995). That is, people use narratives in order to make convincing arguments in which they communicate their perception of the reality. The notion that perceptions and understandings are the result of a belief-system is rejected, actors are rather assumed to be able to change their cognitive patterns. The argumentative approach includes a struggle for a hegemonic discourse, where actors seek support for their perception of reality (Hajer, 1995). In other words, the argumentative approach places emphasis on the interaction between different perspectives and seeks to analyze the ways in which actors argue for their position.

In this 'argumentative game', actors use different ways to frame issues and to try to strengthen the arguments for their position. According to Hajer (2009), people use narratives to make a convincing argument and the concept of *storylines* are central to how framings of the reality is created and reproduced. A storyline can be understood as a "condensed statement summarizing complex narratives" (Hajer, 2009, p. 61) and used by people as a mean to communicate their position. A result of this summary of narratives that the storyline constitutes is that it provides a problem closure in the way that it unites the different narratives into one framing (Hajer, 1995).

To turn a variety of narratives into one uniting storyline also implies a reduction of discursive complexity. This is why opinions that have disparate roots and meanings can still uphold a certain common framing of an issue by being drawn together in a common storyline. Hajer (1995) uses the concept of *discursive affinity* to highlight this phenomenon. The discursive affinity then implies that

actors might not understand the details of an argument, or comply with all the meanings attached to it, but still think that it "sounds right" and comply with a certain storyline Hajer, 1995).

To strengthen one's argument, citations are sometimes used (Hajer, 2009). Hajer (2009) uses the term to describe the in situ mobilization of historical events to understand or actively frame a new situation (Hajer, 2009, p. 63). That is, by referring to a historical event when making a proposal for something new, actors can create legitimacy. The values and meanings associated with the historical event is hence used as a way to explain new events. Positional statement is the term that Hajer (2009) uses to describe a statement that question existing discourses and in doing so, open up for new discursive realities. By suggesting new ways of describing the world, the positional statements create an opportunity for change (Hajer, 2009). In the context of the bioeconomy discourse, other perspectives of forest management than the conventional methods that are raised by some of the forest owners or expressions of alternative perspectives about the concept of bioeconomy are examples of positional statements. When analyzing discourse, the researcher should also pay attention to what is not being said (Hajer, 1995). What an actor chose to not talk about, take for granted or simply don't know about are important aspects to understand actor's perception and potential storylines that the actor reproduces.

The argumentative approach is mostly focused on policy processes, to examine the role of storylines used when policies are to be agreed upon by a group of actors with different frames of reference (Hajer, 2009). In my analysis, I use the argumentative approach as a way to understand and detect the different alliances created on the basis of a shared discourse. Hajer (2009) calls such alliances discourse coalitions. Rather than traditional political coalitions where shared interest is in focus, the emphasis is instead on the linguistic basis of the coalition. Hajer (2009) defines discourse coalitions "as the ensemble of particular storylines, the actors that employ them, and the practices through which the discourse involved exert their power" (Hajer, 2009, p. 64). For my essay, the FOAs, being historically tightly bound to the forest industry and the state in the consensus orientated forest sector in Sweden are assumed to be a part of a common discourse coalition, as referred to by Fischer, Stenius and Holmgren (2020), upholding certain storylines in relation to forest management and the forest-based bioeconomy.

5 Methods

5.1 Text material from FOAs' website

The websites of the FOAs - Norrskog (North Forest), Norra Skogsägarna (the Northern Forest Owners), Södra (the Southern Forest Owners) and Mellanskog (Middle Forest) (my translation) are largely focused on operational work and practical forest management. In order to find more strategic communication and ideological underpinnings for their practices I therefore turned to their umbrella organization, The Federation of Swedish Farmers (LRF) which is the common trade organization of the four biggest FOAs and focuses on the political and strategic representation of private forest owners (Lantbrukarnas Riksförbund, Nd). The selection of material from LRF's website was made based on reviewing all the page topics and selecting pages on topics relating to sustainability, climate, forest-based bioeconomy, private owners and forest politics. Texts about such topics were subsequently reviewed to establish their relevance. I found that all texts that were touching on the selected topics were relevant, which meant that I could include all of these texts in my analysis. The results of the review were four texts¹, which constitute the basis of the analysis of the FOAs discursive formation of the forest bioeconomy. All of the texts are written in Swedish, which implies that I have translated the quotes used in the result section from Swedish to English. The quotes in original language can be found in Appendix 1.

5.2 Interviews with private forest owners

Eight semi-structured interviews with private forest owners were conducted for this master thesis. During the interviews, the interviewees were asked open questions relating to topics such as sustainability, social values, climate, forest-based bioeconomy, private owners and forest politics. The questions were initially kept open-ended and general in order to let the interviewee speak as freely as possible but were followed by more detailed follow-up questions on what the interviewee brought forward. The aim was to allow the forest owner to put emphasis on the questions that they thought most relevant and describe them in their own way. In the interview process, I was especially

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¹ Federation of Swedish Farmers Forest owners (2013). LRF Skogsägarnas Agenda för skogen och klimatet. (Federation of Swedish farmers Forest owners's Agenda for the forest and the climate) [Brochure]. Retrieved from https://www.lrf.se/politikochpaverkan/skogspolitik/lrf-om-skog-och-klimat/ [2020-02-19]

Federation of Swedish Farmers (2018a). LRF om skog och klimat (Federation of Swedish Farmers on forest and climate). Available: https://www.lrf.se/politikochpaverkan/skogspolitik/lrf-om-skog-och-klimat/ [20-02-19]

Federation of Swedish Farmers (2018b). Skogspolitik det här tycker och gör LRF. (Forest politics- this is what Federation of Swedish Farmers think and do) Available: https://www.lrf.se/politikochpaverkan/skogspolitik/skogspolitik---det-har-tcker-och-gor-lrf/ [2020-02-19]

Federation of Swedish Farmers website (2019). 6 fakta om den svenska skogen. (6 facts about the Swedish forest). Available: https://www.lrf.se/om-lrf/organisation/branschavdelningar/lrf-skogsagarna/aktuellt-fran-lrf-skogsagarna/sex-fakta-om-svenska-skogen/ [2020-02-19]

attentive to topics that could reveal positional statements in relation to the discursive structures I had started to distinguish in the material from the FOAs. Initially I planned to follow a more detailed topic-guide covering topics identified by me beforehand as important. However, I noticed early in the process that the specific questions were limiting me from building an understanding of the matters the interviewee was concerned about. Consequently, I left more space for conversations and questions emerging in the interview situation while still making sure to cover the topics I had identified on beforehand. This also allowed me to ask questions that were more context-specific, depending on what the interviewee brought up. The result was interviews where the questions were based on a responsiveness to what was presented by the interviewee. The interviews were all held in Swedish, which implies that I have translated the quotes used in the result section from Swedish to English. All quotes in original language can be found in Appendix 1.

A combination between snowball sampling and maximum variation strategy was used to find appropriate interviewees. Snowball sampling, firstly, is a way to lead the selection process of interviewees by asking people who have knowledge about cases that are relevant to the research (Cresswell, 2007). This strategy is helpful for finding informants in a particular field or sector, but runs the risk of only talking to a specific subset of that sector (e.g. only relatives, only close friends etc.) without the possibility go gain understanding about who is excluded. In maximum variation strategy, the aim is instead to map diverse variations of interviewees and identify common patterns. Initially I was using snowball sampling to get in contact with potential interviewees, starting with a suggestion from my supervisor. When I was in the middle of the interview phase, I realized that it would be useful to complement the sampling method, the reason being that the snowball sampling easily led to interviewees with very similar characteristics. I therefore decided to use maximum variation strategy to diversify the interviewees, mainly in terms of gender and membership in a FOA. To reach female forest owners I wrote an e-mail to the board of a forest organization for women that put me in contact with two of the interviewees that are part of this study.

Despite the effort to cover a heterogeneous set of forest owners in the data collection, it became increasingly evident that private forest owners are a diverse group of people and that this study does not in any way represent all types of private forest owners in Sweden. However, the intention was to interview forest owners from different walks of life as far as it was possible. The forest owners interviewed in this study own forest properties ranging between 20-600 hectares, they live in different parts of Sweden and they manage and use their forests for different purposes. However, although the interviews together cover several regions in Sweden, all of them are located in the south of Sweden. This aspect is important to note since the conditions for forestry are different depending on the

geographical location. Since the climatic conditions varies, the growth of the forest is faster in the south (Nilsson et al, 2019). Another difference between the south and the north of Sweden in this matter is that most of the forest area owned by big private forest companies respectively big state-owned companies are located in the north (Beland Lindahl, 2008; Christiansen, 2018). This have implications for the way that the forest management is carried out and for the landscape. Clear-cut areas are for instance generally bigger in the north compared to the south (Nilsson, 1998). Similarly, the scope of this study is not covering the areas of Sweden where reindeer herding is practiced and consequentially the topic is not covered in this essay.

In order to preserve confidentiality, the names of the forest owners have been replaced by pseudonyms. For the same reason, the interviewees' geographical location, profession or engagement in organizations are not described in detail. However, a brief description of each forest owner is displayed below to give the reader an understanding of the context and a greater understanding of the interviewees.

Finn Finn owns 36 hectares of forestland, both in connection to his home and in a place nearby. He works as a timber buyer. He is not a member of any FOA.

Frida owns a forest property of 120 hectares that she has inherited from her parent. Parallel to the management of her own forest, Frida is studying forestry at a university. Frida is a member of one of the major FOAs. She is also engaged in the board of a national organization for female forest owners that focuses on networks for women and representation in the forest sector.

Ivar Ivar owns in total 100 hectares of forest located in two villages. He lives in connection to one of the forest properties and nearby the other. He has inherited some of the forest and increased his property over time. Ivar is retired but has a background as timber buyer and as a sawmill employee. Ivar is not a member of any FOA.

Kalle Kalle owns a forest property of 150 hectares, of which some is inherited from his parent. His main occupation is in agricultural production. He lives on a farm located nearby his forest property. Kalle is not a member of any FOA.

Per Per is the owner of a forest property of 20 hectares located in a village nearby his hometown. He has a summerhouse in connection to his forest. Per has his profession in another sector and is not a member of a FOA

Tove Tove owns around 60 hectares of forest located in another region than her home region. She has inherited the forest but also increased her property by buying forest. Tove is

retired from a work life outside the forest sector. Tove is a member of one of the bigger FOA.

Tomas

Tomas owns a forest property of 75 hectares together with his wife, and they live in connection to it. He uses his forest to restore natural forest ecosystems rather than for purposes of industrial forestry and is part of running a family business, making alternative forest products. Tomas is not a part of any bigger FOA but is a co-founder to the alternative FOA that Örjan is also part of. Tomas has a background as forest researcher and has written several books about forest and forestry.

Örjan

Örjan owns around 600 hectares of forest together with his wife and they are living in connection to their forest property. In addition to forestry, the family also runs a tourist operation with focus on nature tourism. Örjan is a member of one of the bigger FOAs but is also one of the founders of an alternative FOA that emphasizes alternative forest management methods and refined forest products. Örjan has a long background of working in the forest sector and he is presently a columnist in one of the major forest papers in Sweden.

5.3 Additional sources

As an addition to the texts and the interviews, I attended one forest seminar and one forest conference where a wide range of stakeholders within the Swedish forest sector were present. Firstly, I attended a public seminar that was arranged by The Royal Swedish Academy of Agriculture and Forestry (KSLA) on 20th of October 2019 in Stockholm. The basis of the seminar was a report commissioned by KSLA where the aim was to find common definitions about forestry within the Swedish forest sector. Representatives from FOAs, The Swedish Forest Industries Federations as well as The Swedish Forest Agency, The Swedish Environmental Protection Agency and forestry researchers from Swedish universities among many others were there and held presentations. Secondly, I attended the Swedish Forest Program's annual conference that was arranged by the Swedish Ministry of Enterprises and The Swedish Forest Agency on 4-5th of December 2019. At the conference representatives from most parts of the Swedish forest sector Swedish authorities, academia, enterprises and NGOs were present and seminars and discussions between different stakeholders took place. On both of these occasions, I was able to take notes during the lectures and discussions, which gave me insights into the general context of forestry in Sweden. I also got an understanding of how different actors talk about different issues and how actors interact with each other. It was valuable to have this understanding before starting to collect my main empirical material since it gave me and

idea of where to start my analysis. I also made sure to study national media reporting, mainly from newspapers but also from TV-shows and radio to which gave me the overview of the sector, necessary to the understanding of the wider context for the discourse on the bioeconomy. To have this understanding of the forest sector and the concept of bioeconomy is, among other things, crucial in order to explore what aspects different actors *do not* talk about. By not only paying attention to what is said but also to what actors decides to be or unintentionally are silent about gives the researcher important insights into the actor's perception of the world (Hajer, 2009).

5.4 Analytical procedure for text analysis

The documents to be analyzed from the websites were collected before the interviews and the coding of the content were initialized early in the process, parallel to when the interviews were held. There are different approaches to when to start analyzing the data. Miles and Huberman (1994) argue that there are several advantages of coding already early in the process since it can uncover potential sources of bias, reveal incomplete data and give the researcher access to an emerging map of how what the data contains and what it means (Miles and Huberman, 1994). By looking at the websites first, some initial themes could be distinguished early in the process.

As I conducted the interviews, I in parallel started to transcribe completed interviews into text, and in doing so, I also got an opportunity to discern possible themes in the interviews.

After transcribing all interviews, the next step was to find patterns in the texts by looking at potential analytical themes. I did this by thematically coding the data guided by the research questions and the theoretical concepts. In practice this meant that that I color coded statements, utterances and recurring formulations in different colors and placed them into different categories based on themes grounded in the research questions and theoretical framework. While categorizing the different segments of text material and transcribing interviews I simultaneously examined the text material from the websites and the transcribed interviews, comparing it to the codes in order to avoid that context would be lost. When this step was done, I started to compare coded transcripts between actors to illuminate differences and similarities. In this way I also started seeing how some statements confirmed a discourse-coalition while others brought up contrasting views, potentially revealing positional statements. In the final step the focus was on understanding what different discursive framings which were demonstrated in the material, what these framings implied and to what extent the framings intersected with each other.

5.5 Limitations

The data collected through interviews are as Silverman (2014) puts it, *researcher-provoked data*. What is meant by this is that the researcher is actively creating data, through asking questions, data that would not exist without intervention. The alternative is *naturally occurring* data which is data that already present without the involvement of the researcher, just like the text material on the websites of the forest owner associations.

A potential risk when conducting interviews is thus that I, in my role as a researcher are affecting the way that the interviewees respond to my questions, failing to ask open-ended questions where the interviewee is given room to articulate her/his own views. Furthermore, my previous understanding of topics discussed in the interviews inevitably forms my way of both asking question and understanding the answers. However, the consciousness of the role that my personal understanding play in the context of an interview made me very careful both in the data collection phase and when analyzing the data.

The scope of this essay is limited, and a larger range of material both from FOAs and private forest owners would have been preferable. I have deliberately approached interviewees with different key characteristics (such as gender, age, location and size of forest) with the aim to capture variation in perspectives. Nevertheless, my small sample implies that I did not for most aspects achieve saturation in perspectives given about Swedish forests in the bioeconomy. As earlier mentioned, the interviewees included in the study are all from the south of Sweden, which implies that perspectives that can be assumed to be of relevance in other parts of the country are not brought forward as they would perhaps have been with a more diverse selection of interviewees. Furthermore, even for aspects where saturation seemingly is reached (in the sense that the variations in answers did not increase with increased interviews), I still cannot be certain that the saturation is valid, due to the limited sample size. A wider range of actors and a larger quantity of data would be needed to draw more generalizable conclusions.

6 Result and Analysis

In the following section, the results of the textual analysis of material from websites and interviews will be presented. The analysis identified three storylines, which form heading 6.1-6.3. These storylines are condensed statements that unite actors around a particular discourse (i.e. they help the forming and upholding of discourse coalitions). Heading 6.4 does not represent a storyline, however the theme can be assumed to be of importance for in the forest bioeconomy discourse, nevertheless, since Swedish legislation stipulates that Swedish forestry should care equally for environmental, social and economic interests. At the same time, there has been significant criticism from the environmental movement, researchers and concerned citizens that the forest sector prioritizes production and economic gain over environment. This implies an ongoing tension in Swedish society about the balancing of these interests (Fischer et al 2020) and it can be assumed that the discourse of the forest bioeconomy must be able to balance these interests in order to gain wide societal acceptance. The text under 6.3 thus analyses how this is done.

As my aim is to look at the discourse of the forest bioeconomy as articulated by the FOAs in the light of how it is (more widely) articulated by individual forest owners, the results are presented for each identified storyline. This is done by first describing the building of the wider argument of the particular storyline drawing on findings from the analysis of text material from the FOAs websites. This is then contrasted with the findings from the analysis of interviews with forest owners to see to what extent the storyline is supported or not by the forest owners. By doing so, it is possible to reveal how discourse-coalitions about forest-based bioeconomy are confirmed respectively contested and how the actors use different tools to discursively frame their perception of the reality. While discourse coalitions are the linguistic part of political coalitions in society, Hajer (2009) acknowledges that such discourse coalitions often mirror political coalitions. Thus, lastly section 6.5 presents the analysis of to what extent official membership in a FOA had any seeming effect on the extent to which the private forest owner aligned his or her arguments with the dominant discourse as represented by the FOAs.

6.1 Private forest owners are responsible

A recurring theme in the material from the FOAs' is the responsible forest owner as an important actor. Assigning the forest owner this role in the context of forest management, relates to the wider discussion on how the forest is best managed - an historical and ongoing debate. Since most of the material from the organizations are directed towards the private forest owners, the fact that the forest

owners are seen to hold a central role in the forest management is not very remarkable in itself. The message is for the same reason often written in the form of how the FOAs thinks that forest owners *should* be and behave. However, it is interesting to note what features of the forest owners that are emphasized in the text material from FOA. The forest owner is described as someone who cares for his/her forest and therefore s/he should be given room to decide in what way the forest should be cared for. Central to this theme is the standpoint that forest owners should be able to make decision for their forest freely and decide for themselves, a perspective in line with what is commonly called *'freedom with responsibility'* and that is generally associated with Swedish forest law and policy. The FOAs writes that:

Secure property rights and user rights give safe forest owners that make long term plans and dare to make the investments that are not only beneficial to the forest owner herself but for the whole society, the climate and the environment. (The Federation of Swedish Farmers, 2018b)

This puts the forest owner at the center of forest management, implying that the forest owner is the one that is best suited to make decisions that are not only beneficial for the forest owner, but for the surrounding society and natural environment. The view that the ways of managing should be decided by the forest owners themselves is repeatedly put forward in the material. The fact that the FOAs brings up the importance of "secure property rights and user rights" somewhat gives the impression that these aspects are questioned, however, the FOAs are not further specifying whether the property rights and user rights are at risk indicating that the phrasing rather serves as a mean to communicate the importance of the aspects in general.

In the interviews with the forest owners, the standpoint that forest owners should be able to independently decide over their forest, is articulated by several of the forest owners. They emphasize that they are responsible and that they want to plan their forestry by themselves and that the best result is given when the forest owner is not forced to follow rules or guidelines pointed out by state authorities or other external actors. The reasons behind this standpoint are rather uniform and can be summarized mainly as two arguments: inconsistency from the authorities and place-based knowledge held by the forest owners. So far, the storyline put forward by the FOAs seem to be supported by most of the interviewees. An illustration of the perception that authorities tend to change strategies and regulations over time is given by interviewee Ivar that describes a forest area that he and his wife used for recreational purposes, but where the authorities have had changing perceptions of over time.

"But you can see that there have been some different state directives over time. 30-45 years ago, I made a new forest management plan. I had this grove nearby (...) and that was forest that one in this time should fell and plant spruce on. It is one of these very nice groves, with oak, aspen, birch and spruce. It is a grove for forest grazing from the beginning, there are some clearings in it. When we got it, my wife said directly that "we never fell this one" "no" I said "we never take down these trees, here's where we have our mushrooms, it's almost magical to walk there." Then 15 years passed and I was out there looking at it and then suddenly it became a key biodiversity area - suddenly it was that valuable." (Ivar)

Several forest owners are describing themselves in a similar way, that they constitute a constant together with their forest, while shifting political agendas shaping the different reforms of the Forestry Act and forest policy, are representing an external source of insecurity.

The interviewee Finn describes his reluctance to general standards of forestry by expressing that each forest area is different, he later continues this argument by saying that the forest owner is familiar with the characteristics to a larger extent than is possible for the authorities.

This very easily makes everything look the same as well. When one has that as a starting point, one might miss out on what is special to that area where one is going to do something. (Finn)

However, even if most of the forest owners are stressing the importance of an independent management of their forests, some forest owners seem more open to how external actors value their forest, providing another view of the role of the forest owner. In the quote below, Frida is representing the positional statements to the dominant storyline, where a more positive perception of the involvement of authority is brought forward and the view that to be a responsible forest owner can imply to hand over the control of the forest to others. A frequent topic in the interviews is how the forest owners view natural reserves, and it is in this context Frida says that:

I have signed the paper that it should become a natural reserve and then I will have to accept it and try to understand as well. I think that it is my duty, to understand what values that are there, that people see and how we can make the best out of it. (Frida)

Several of the forest owners are comparing their own forest management to other ways of managing the forest, which are, in their opinion, not as beneficial to the environment. They mainly cite historical examples and refer to other types of ownership. Interviewees refer to the forest management in 70s as period when the environment was given less consideration and as a period of time when the big forest companies set the agenda. This is put forward as a contrast to the forest management the forest

owners are practicing today, and the practice of private forest owners are held in contrast to big forest companies. The interviewee Ivar says that:

"When it comes to the big forest companies, it became very one-sided for a while. In the 70s, big clear cuts were made, and one does not do that in the same way anymore... But that hasn't really occurred in the private forest management." (Ivar)

By citing the historical practices and the way in which big companies have overused natural resources, with the current practice that they represent, the forest owners are forming an image of themselves as responsible and considerate. This citation thus aims to strengthen the argument for the discursive framing that advocate the benefits of the present forestry practice.

The storyline of the responsible forest owner is hence uniting the FOAs and the forest owners as it confirms their perceptions of themselves. The FOAs seem to link the image of the responsible forest owner to the rights of the forest owner to manage the forest independently, a perspective that is also confirmed by several of the forest owners. Both the FOAs and the forest owners articulates that a responsible management includes social and environmental considerations, emphasizing that it is not only the forest owner that benefits from a more independent management of the forest, but rather that it is of benefit to both nature and society. The fact that the forest owners use citation to point out that the forestry of today is more sustainable than in the past indicates that the forestry of today is fulfilling environmental and social requirements. In practice, the storyline hence signals that there is no need for further efforts for sustainability since forest owners already take responsibility for it. However, some of the forest owners are posing positional statements regarding the role of the authorities in relation to nature reserves that opens up for an alternative to the perception of the forest owner as the most qualified agent to decide over the forest at all times.

6.2 Private forest owners are actively managing the forest

In addition to the portrayal of the responsible and caring forest owner, the FOAs are also emphasizing the importance of an active forestry. The word *active* is used to communicate several different meanings. Formulations such as "*actively managed*" (The Federation of Swedish Farmers, 2013; The Federation of Swedish Farmers, 2019) and "*active usage*" (The Federation of Swedish Farmers, 2019) where connections are made to a forestry that is producing a high yield and that are efficient from an economic point of view are used repeatedly in their strategic communication.

The meaning attached to the practice of *active* management as something virtuous and preferable, in contrast to its opposite: a *passive* management is something that is apparent among all of the forest

owners, just as well as with the FOAs. The interviewees are sometimes talking about management without specifying whether it is active or not. However, when putting the separate interviews into the general context, they confirm the perception of significance of the word active as an important feature of management although what is more precisely meant by *active* varies between the actors as will become evident further on in the section.

In many of the texts, the FOAs also connects the concept of active forestry to benefits for the climate. This can be interpreted as a way of strategically aiming to create a vision of the production forest as the best type of forest for the climate. This is creating a form of discursive affinity, since it builds a storyline about climate that many different stakeholders can adhere to without actually making the linkage to production, which the FOAs are doing. Formulations such as we think that an active management with high and persevering forest production is an efficient mean to contribute to the solution to the climate issue" (The Federation of Swedish Farmers, 2013) and "...there are hence good opportunities and a big responsibility that through management [of the forest] affect and alter the capacity to bind carbon dioxide" (The Federation of Swedish Farmers, 2013) are connecting the active management to the forest as part of the solution to the climate issue. As a contrast the FOAs argue that forest that is not actively managed, is not as beneficial from the climate perspective as the production forest, saying that: "actively managed forest has a greater growth rate and binds more carbon dioxide than natural resource that are put aside and left to their own development" (The Federation of Swedish Farmers, 2019).

The fact that the Swedish Forestry Act are not regulating the way that forest owners are managing their forest in detail implies that the forest owner are not in any way obliged to be actively managing their forest in the way that is promoted by the FOAs. The perception of the *active* management as essential to forestry is thus not motivated in the law. However, FOAs exemplifies a number of measures that forest owner can implement in order to actively manage their forest, measure that are put in place to ensure a high productivity (The Federation of Swedish Farmers, 2013).

The discourse affinity that the FOAs could be said to create, communicate that the protection of nature and society goes in line with production of forest materials that are necessary for the forest-based bioeconomy. By employing the concept of *active* management the FOAs hence refers to several additional meanings that ultimately relates to production. There are however reasons to assume that there is a discourse affinity within this storyline that does not only concern production and climate, as will be shown below.

In similarity to the FOAs, several of the forest owners also describe how it is important to *actively* manage the forest and to not, passively, just let it be. An example is the interviewee Ivar, that phrase his view on forest management in the following way:

I have never thought that the forest should be left standing, that is something that I have tried to teach my children, that forest should be managed. In the long run you get more money from managing it, even if there are some expenses. One should be cleaning; one should be thinning and planting. One should not just let it be. (Ivar)

Ivar is in this quote referring to efficiency and economic aspects as a motivation for an active management of the forest. However, the emphasis on that a forest owner *should* be managing the forest in certain ways seem to suggest that Ivar attach the *active* management to more than only in connected to production. It would rather seem that the active management is used as an imperative for a moral dimension of how forestry should be conducted, something that is further emphasized by the fact that Ivar want to pass the value on to future generations.

There are several forest owners that seem to put additional meaning into the practice of active forestry, where different meanings are articulated in different ways. To manage the forest seems for some forest owners to be a virtue, partly with respect to the aesthetic perception of the forest. Several of the forest owners use the concept of "tidying up" in the forest and the "neat" forest as preferable. An example is posed by Kalle who says that: "..it's nicer to live in a forest where it is nice, straight trunks and where it is not a lot of uprooted and disrupted trees and stuff like that I think" (Kalle). Finn talks about how the aesthetics in the forest are something that affects his way of thinking about the forest.

You get a little bit damaged, what a forest should look like. I guess I am very aesthetic in my thinking. That a forest should look good and that depends on liking and taste, what is nice and good-looking. A forest that isn't cared for is in some way not nice to look at" (Finn).

This views on management of the forest that the forest owner express in the quotes above, all seem to suggest that the private forest owners often consider more aspects than to maximize production when managing their forest. However, although factors relating to moral and aesthetics seems to play a role for the forest owners, the way that Ivar, Kalle and Finn prefers to manage their forest is in line with the active management that the FOAs promote, which hence implies that these forest owners comply with the storyline that the FOAs suggests.

An additional for reason for active management that some of the forest owners express, is that the management of the forest is a necessary mean to get money, in the short term, by taking out forest continuously rather than letting some trees going to waste or just growing older. This is also in line with the productive strategy that the FOAs suggest, a way of forestry that the FOAs are linking to benefits for the climate (The Federation of Swedish Farmers, 2013).

While active forestry's implications on biodiversity is only very briefly addressed by the FOAs, most forest owners also mention the implications of active management on biodiversity, whereas it is often better for biodiversity that some trees are left to rot, or left to grow. Also forest owners like Ivar, Kalle and Finn point out that they are aware that it is sometimes beneficial for biodiversity to skip some parts of that the active management that they generally prefer. The reasons given by the forest owners to why this more passive management is not practiced, despite its benefits, are motivated in different ways. For some forest owners it is because of aesthetic aspects where the forest owner want it to look nice, to others because they want to use the wood as a source of income. What is evident is however that some of the forest owners have emotional and environmental aspects in mind when talking about their forest management.

While most of forest owners comply with the FOAs storyline, the interviewees Tomas and Örjan seemingly challenge the virtue of the managing forest actively as upheld in the FOAs storyline. Örjan is emphasizing how less active management of the forest is preferable in the following way:

.. today we often work against nature and not with nature. Most of the time when you plant spruce, then a lot of deciduous trees"comes up naturally as well. Then you send someone with a clearing saw that clear off all those deciduous trees that the nature wants to produce. That not so smart, I think. (Örjan)

In this statement Örjan emphasizes that the active care of the forest that the FOAs advocate is not always what is more profitable or efficient, and also that it is not the best for the environment. However, at the same time he suggests an alternative forest method that also requires an active care in order for the forest to grow in a preferable way. Interestingly, he does not actually reject the notion of the active forest owner, but rather puts a different meaning into the concept. Örjan describes how he is interested in unconventional methods that are not subject of much research and that he therefore has made a 'good practice' forest on his own land to try out other methods. Continuous-cover forestry implies that the trees are taken out one by one in, a method that is more labor intensive than the conventional clear-cutting method. In the following quote, it is evident that Örjan is not only focusing on economic or productive aspects in relation to his forestry methods, he is rather sharing the aesthetic

and emotional perspectives with several of the other forest owners when talking about his continuous-cover forestry.

When you bring the public here they like this. They think it is so nice. "Wow, look at all this blueberry bushes - they're left." And the hunters think that it is fantastic, "what a forest!". And then suddenly, the [forest] machine guys, they told me, one old machine operator, he said that "in my whole life, I have never taken my wife out on any cutting area before, because it is nothing one is proud of. But you know what? I did this time (Örjan)

While most of the forest owners' approach to forest management seem to be driven by a combination between different types of emotional considerations and economic aspects, one of the interviewees stands out as considerably more focused on the environmental consequences of forestry. Tomas emphasize how he wants to provide an alternative way to manage forest with the goal of preserving species and learn from his forest:

It is a way of learning. I have the forest to learn and I also have the forest because I feel that it such a hard management of the forests today, so if I can own forests where I alter the biodiversity, I simply contribute to the conservation of species in the long term. (Tomas)

Tomas describes how he consequently clears out spruce in order to make room for the natural recurrent of other species and that he collects seeds in order to regenerate pine trees on the land that is most suitable for pine trees. His methods involve active and manual work with recurrent management where the aim is to create what Tomas calls "continuous systems" that should not be subject to the industrial forestry that Tomas advocates against.

In conclusion, both the FOAs and the forest owners are outlining a picture of a private forest owner as an actor that employs an active management of the forest and in that way takes responsibility for the forest. The word "active" is creating a discursive affinity between different ideas and values around how forests should be managed. This discursive affinity shows that although most of the forest owners have different motives for promoting active forestry, their emphasis on the importance of active forest management still supports the storyline provided by the FOA. There are however, two forest owners that, while supporting the value of an active forest owner, more clearly provide arguments that go against the wider discursive formation made by the FOA linking active forest owners and conventional forest management. What is notable is that although the reasons for managing the forest actively are radically different, the actors are all in different ways using active management as term to communicate their perspectives on forest management. Active management

is at the center of a good and responsible forestry according to all actors despite different perceptions on what the active forestry ideally implies and result in.

6.3 New forest-based products are a central part of the development of the bioeconomy

This is a storyline that connects the forest products with visions of the future of forestry and the biobased economy. It is perhaps the theme in this section where the forest-based bioeconomy is most explicitly discussed. The term bioeconomy is seldomly used in the texts from the FOAs, however, there are a several formulations that translate to the concept. It is for example stated that:

Our goal is a resource efficient and bio-based society, where fossil and other resource demanding materials are replaced by wood raw material for the benefit of the climate (The federation of Swedish Farmers, 2013).

In the text material from the FOAs, the theme is recurring with similar phrasing, indicating a coherent framing of new products as central in a bioeconomy. Firstly, the FOAs points out that the new forest-based products can replace "less climate friendly" (The federation of Swedish Farmers, 2019) products such as concrete, steel and oil. By putting together the climate aspect and the examples of fossil materials, the FOAs communicates how forest basically makes other non-renewable resources unnecessary. This impression is backed up by the statement "All that is made out of oil today can be made out of forest in the future" (The federation of Swedish Farmers, 2018a) where the forest is introduced as something for the future, while oil is present and history. Similar phrases include: wood "can replace everything from oil to cotton to plastic and concrete" (The federation of Swedish Farmers, 2018b).

It is again apparent that the climate is used as *the* argument for new forest-based products in the communications from FOA. There are several examples of how this is highlighted: wood products should "replace less climate friendly resources" (The federation of Swedish Farmers, 2019) and "growing forest that absorbs carbon dioxide from the atmosphere gives a renewable resource" (The federation of Swedish Farmers, 2018b) are two of them. How the natural environment as a whole is affected if all of the products mentioned would be made out of forest is not communicated, which underlines how the storyline reproduced by the FOAs are avoiding to turn the attention to other environmental aspects than the climate issue. This discursive framing of the forest-based bioeconomy is familiar, just like in 6.2; the FOAs emphasizes the climate, in this case by connecting it to certain products.

In the interviews, all of the forest owners thought that it was positive that new products made by forest-based material were developed and could replace fossil-based products.

The interviewee Tove says that: "I think wood is better, to use wood as far as it is possible. Apparently, it is also possible that wood can replace some of the plastic." (Tove). The interviewee Kalle says that: "Instead of importing oil from Saudi Arabia, we could perhaps use our own pine top and make fuel from it." (Kalle). In these examples, the interviewees are just like the FOAs saying that forest is a better alternative to other kinds of material. Both Tove and Kalle lift forward that fossil-based products like plastic and oil are inferior alternatives to wood. Apart from the climate-benefit argument emphasized in the FOA storyline, the argument that wood is a national resource, as opposed to oil, is however another factor that the some of the forest owners also bring forward as a positive aspect.

Although the forest owners have an overall positive attitude towards new innovations of forest products, the new type of products does not appear to play any major role to how the forest owners plan and conduct their management and the different management ideas discussed in the interviews all relates to more traditional forest products, mainly pulp and wood. This indicates how this storyline is not including the interviewed forest owners.

When asking the forest owners what they would prefer that their forest would be used for all of them expressed that timber would be the product they preferred. This might indicate both that the emphasis placed on new forest products in the bioeconomy discourse has not *yet* influenced forest owners values around forest products (time), and that it has not influenced them significantly as they place other values in their forest than secondary production. The second explanation is supported by stronger engagement with social and biodiversity values of the forest amongst the owners than the strongly production oriented overall bioeconomy discourse shown in the previous section. The absence of mentions of new-forest products in the articulations of the forest owners might also be an outcome of that what the wood finally is used for is not something that is close to these forest owners' day-to-day engagement with their forest. At the same time when talking about the final use of forest, several of the forest owners emphasized that they would prefer that their forest became timber. "If you are only taking the economic aspect in to consideration, you'll get most payed for wood that are used as timber" (Frida). "What I would prefer it to be? That would be for it to be the highest quality of timber" (Kalle).

The conventional forest products might also be preferred because the new products are not something the forest owners feel that they can rely on. One forest owner expresses it in the following way:

Well, primarily I want it to be a building material; I think that is the biggest opportunity. If they can make pine oil and stuff, that sure is good. However, that is most likely from the [wood] of less good quality. And completely new products can be developed, we don't know that. (Ivar)

All of the forest owners appear to be more engaged and knowledgeable about practical management of the forest, relating it to something they have more power over themselves, while the external demand connected to different products are decided by someone else. One of the interviewees formulate the uncertainty of what is demanded in the following way: "But then it is like this, some say that you should surely go for this or that, but I think you should go for what the land is best suited to. Then, what the price will be in a hundred years - we can not foretell" (Ivar)

While most of the interviewees are positive towards the new products, some of the interviewees are pointing out that concept of bioeconomy is distracting people from the "real problems". Interviewee Örjan:

Of course, we can take out some more branches and tops and shrubs and stuff like that. It can give some and you can possibly count on that we will get about 20 % more growth within 30 years if you count forward. But still: it is not enough to replace the fossils. (Örjan)

Here the interviewee questions if the produced forest will be enough to produce the new products that are suggested within the discourse. The question of limits for the forestry in terms of climate change mitigation is something that the FOA are not discussing in their material.

The interviewee Tomas is critical to the concept of bioeconomy, also from the standpoint that there are limits to growth.

The forest sector in Sweden uses the concept of forest bioeconomy carelessly. Nobody knows what it is, right. It is just like a new term for eternal growth. That is what it is. That is what you can translate it to, equal to the belief in the eternal growth (Tomas)

Both Örjan and Tomas express positional statements, where the storyline upheld by the FOAs is questioned. While the storyline is focused on the seemingly endless opportunities of the forest, these two forest owners challenge this notion by pointing out the limitations of forest production. The positional statements that is brought forward by Örjan also challenge if the new forest products are

an adequate focus in the replacement of fossil fuels, suggesting that other aspects are more relevant in order to address the issue.

In this section the analysis shows how new forest-based innovations are mostly received positively by the forest owners as an opportunity for the sector, mostly in respect to the climate issue. However, it is not an aspect that practically affect the forest management or the way that the forest owners make decisions about their forest. Some of the forest owners also contest the importance of the products as part of the solution to the climate issue. This illustrates that the discourse coalition that the FOA are part of, that unite around the storyline of the importance of new forest-based products, is not supported, but only partly challenged by the interviewees. The finding that the discourse coalition exists and is seemingly powerful can however be supported by the fact that two of the forest owners rejects it and position themselves against it.

6.4 Economic, environmental and social values can be combined in Swedish forest-based bioeconomy

This heading, unlike the previous three does not represent a storyline per se- but an underlying assumption of the discourse coalition that the FOAs upholds. The Swedish Forestry Act have two goals that are given equal weight, a production goal and an environmental goal (Appelstrand, 2007). Furthermore, the Strategy for the Swedish National Forest Program states that the Swedish forestry should be sustainably managed, lifting forward that all three dimensions of sustainability, (economic, environmental and social) should be balanced in the forest management (Fischer, Stenius, Holmberg, 2020). If the forest-based bioeconomy discourse should successfully be framed as sustainable, it must be able to discursively combine these values. The analysis in this section shows that this is done by using climate as a representation for environment. By doing so, the environment is at the same time simplified and reduced to meaning only the climate. On the websites of the FOAs, private forestry is presented to be aligned with both social, environmental and economic factors. The text presenting 6 Facts about the Swedish Forestry begins with the statement that: "With their [private forest owners] sustainable practice we get more singing birds, more climate friendly products and an increased welfare on the countryside." (The Federation of Swedish Farmers, 2019)

Here the sustainable practice seems to point at biodiversity just as well as sustainability in relation to the climate. It is however notable that the majority of the texts on the FOAs websites are focused on the climate aspect of sustainability while biodiversity and other issues within environment are largely left out. This is combined with an emphasis on how the forest that is used for production purposes is the one that is most appropriate to address the issue of climate change. The FOAs express the role of the forest owner and the production in the following way:

LRF [the Swedish Forest Owner Association] acts for a greater understanding for the role of the [private] forest owner and the important role of the productive forest to manage the climate transition and develop the bioeconomy. (The Federation of Swedish Farmers, 2018b)

While the FOAs communicates that the three dimensions are possible to address simultaneously, the different forest owners have no uniform answer to the question of the extent to which the environmental and economic aspects of forestry can be combined. All of the forest owners expressed an interest in caring for the forest with regard to environmental, social and economic values but they all expressed that there are situations where one aspect needs to be prioritized over the other. However, several of the forest owners also said that there are some aspects of forestry when the environmental and the economic values are in line with each other. One example is when Frida discusses how establishing a new track can be beneficial when collecting felled wood, since it implies that she can minimize the use of for forwarders, a forest machine that is used in the terrain to collect wood where there is no track.

It feels like economic and sustainable sometimes goes hand in hand. If you would forward the wood [using a forwarder in the terrain] instead of a truck that would go all the way in and collect it, there will be incredibly much more fuel needed and it damages [the terrain] incredibly much more. At the same time, it gets more economically more profitable for me if I have a track that goes all the way where a truck can take me (Frida)

Here, Frida points out that the economic benefits from establishing a track will also be beneficial both from a climate perspective (less fuel) and for the forest ecosystem (since the terrain gets less damaged).

However, most of the interviewees highlights that there are trade-offs between what is preferable from an economic point of view and what is better for the environment. The forest owners are both talking about the conflict between economic efficacy and biodiversity and forest managements' implication for the climate aspects. One of the forest owners, Tomas, is questioning if the concept of bioeconomy is combinable with the different aspects of sustainability, where he especially points out the fact that the environmental sustainability is a broader concept that contains both the climate issue and the issue of biodiversity. He is linking the neglect of biodiversity, in his opinion, to the concept of bioeconomy: "Yes, it [the bioeconomy] is again that kind of buzzword. Purely theoretically,

completely correct, but biodiversity has no room within it." (Tomas). Tomas continues with saying that:

Forest management with both climate and the biological values taken into account doesn't work at all, it is actually like that. I know exactly how I should do if I were to produce 50 % faster growing trees on my grounds. I know that for sure. But then the trees would grow so fast that I don't even know if I would get any nesting birds there. (Tomas)

Observing the positional statement posed by Tomas when he is making a distinction between climate and biological values, the fact that this distinction is not done by the FOAs makes the differences between their discursive framing of sustainability more apparent. Another aspect that can be observed in the interviews is the fact that when the forest owners were asked about environmental aspects in forestry, they primarily talked about biodiversity. Although they also discussed climate issues this was not what they were mainly preoccupied with when planning their forest management. An example is Frida that talks about biodiversity when she is asked about what responsibility a forest owner has for the environment:

I think I have a responsibility. Both to have the competence needed to understand both this thing with biodiversity and similar things and to not think that a pure spruce forest is good for all species and all flowers and all plants. Because there is nothing on the ground when you walk into such a forest, there is nothing that grows there (Frida).

Their view on the climate concerned the positive effects of mitigation of carbon dioxide to some extent but the interviewees also raised concerns about the extent to which the mitigation of carbon dioxide would be enough to really make a difference:

To build with wood sure is fantastic if one can find good quality wood. Then it is good if we build with it and let it bind coal in large periods of time. I think that is good, but we have very poor calculations on how much that can be (Tomas).

The interviewees generally showed an awareness of the changing climate and what it might imply for their forest. Their focus was however less focused on the positive effects of forestry in terms of carbon mitigation and more on the practical effects of weather and temperature on their forest and what economic implications these effects could result in. The potential implication of climate change that came up most frequently during the interviews concerned extreme weather such as drought and storms and increased damage by insects.

There are people that think about [how to solve problems related to the climate] and it is these things that have come up a lot. That you should mix different tree species and stuff. Because they can protect each other when it is windy but also against pests and similar. So, at lot of this have come in, but I do not know if there is research on the topic since it is this new. (Frida)

There is a hope that the trees will grow a little better. But there is a big worry for new damage, new pests, new storms etc., so, taken together it sure is deeply unfortunate that we get a changed climate. There is no positive side of that. (Örjan)

And then when you fell, you think a little before you do it. Because I see that on the last cutting that it was quite a lot of trees that fell down, due to the wind, in the edges [of the clear-felled-area]. So that is something you got to think about even more with the climate changes. (Per)

This theme has its basis in the premises for forestry as put in Swedish forest law and policy, that environmental and economic aspects should be considered of equal weight. This is a combination that the FOAs are accepting and communicating, and that it includes in its discourse of the bioeconomy by 'translating' environment to meaning only climate, and environmental benefits to mean only climate change mitigation. It is only by reducing the environment to only include climate that it is possible to promote production forest as the most environmentally friendly. However, some of forest owners actively point out that there is a tradeoff between economic benefits and environmental benefits, in particular for biodiversity. They also point out the risks that climate change pose to the forest in the forms of new pests and extreme weather and its effects on productivity and economic aspects. Here there is clearly no common discursive framing by the FOA and the forest owners, rather forest owners' articulations challenge the discourse put forward by the FOA. While the FOA seem to be focusing on the how the forest can contribute to the solution to the climate change issue, the forest owners are largely concerned with the biodiversity of the forest and the negative effects of climate change for the forest and for their own financial returns.

6.5 The role of membership in FOA

In the interviews, the forest owners where asked why they were or were not part of one of the four major Forest Owner Organizations in Sweden. Three of the forest owners are a part of one of the four forest owner organizations while five of the forest owners are not. This information was collected to explore if the membership in a FOA played any role for the questioning or support of the storylines articulated by the FOAs, hence to see if there was any alignment between discourse coalitions and formal coalitions in the form of membership in an organization. Since critical discourse analysis

assumes a dialectic relation between discourse and the material world where external factors can be affecting discourse it is of interest to look for other aspects of a social phenomenon than purely discursive framings.

The FOA describes themselves as organizations that are "owned and led by their members" (The Federation of Swedish Farmers, 2014). On their webpage they are also referring to the historical background of the FOAs stating that "nowhere else in the world have the family forestry played such a crucial role for the development of the country's forest management and the forest industry" "(The Federation of Swedish Farmers, 2020). The more concrete role of the FOAs for their members is listed in four points including selling the members' wood to the industries, full forestry service, advisory services and training, a work for an active forestry that is environmentally aware and monitoring the business interests of private forest owners.

When asked about the reason for their membership in FOA two of three forest owners that were members due to tradition:

Yes, I'm part of the Southern Forest Owners and I have in fact always been. It is some kind of generation stuff. Södra is somehow built on it reaching over the generations. You inherit that you like Södra, grandpa, mum and then me. It is part of the deal... (Frida)

Tove turns to similar reasons for her membership in the FOA *Mellanskog* (Middle Forest, my translation):

I am not active in any forest owner association, but I'm part of Middle Forest. I am not active in there whatsoever [...] I have an account since my father's time. He cared for the forest owner associations, he cared for them. (Tove)

Furthermore, Kalle, one of the forest owners that were not members of FOA also referred to decisions made by generations before him to explain his position. "No. No, there is no answer to that [to why the forest owner is not part of a FOA]. I am just not part of it. Since dad was not a part of it, it has not been that way." (Kalle).

Örjan explains his membership in an FOA with the fact that the membership is free and that it does not hurt to be a member just to see what is going on in the FOA. He states that: "We are part of Mellanskog [FOA] because it doesn't cost anything." (Örjan).

This perspective of indifference towards the membership in the FOA is also apparent by the forest owners that are not part of any FOA. Ivar that has previously been working in the forest sector as a timber buyer express his reasons for not being part of a FOA in the following way:

I'm not in a FOA since I have worked at a sawmill. In fact, it has happened completely naturally that I'm not part of it, but I could just as well be part of it. I know many of their inspectors [employees at FOA] since I have been out there when they have been helping neighbors. So, I have had some insights, and some guidance. (Ivar)

Apart from the fact that Ivar says that being a member or not is not a big question for him, the fact that he also talks about his relation to employees at the FOA also adds to the importance of social relations as a reason for being or not being a member of a FOA.

The statements below, made by the forest owner Per is adding to the notion of indifference towards membership. However, Per also adds another reason for why he prefers to not be a member of a FOA. While Örjan, in the quote above refer to the fact that the membership is free of charge as an explanatory reason for his in indifference towards the membership, Per emphasizes the economic aspect as a more active motivation for his attitude towards membership in an FOA. He is saying that there are economic benefits of not being part of a FOA:

It just haven't happened [to be a member of a FOA] but we don't have that magnitude either. And then, I feel a little bit like this as well, that when we were making this felling, then I asked for an offer from different companies and the one that gave the best offer got to do it. It was a big difference. It differed 100 000 SEK. But I don't think that others do what I do, out of tradition. (Per)

The idea of asking for offers from several companies before deciding whom to hire for the felling of one's forest is a topic that several of the forest owners bring up. Their picture is that most members of FOA are loyal to the FOA and therefore sell to them regardless of price. However, several of the interviewees that are members of a FOA also have the habit of asking other companies. What is notable however is that all of the interviewees that talks about their way to go about this question, think that their way to do it is rare.

Örjan explains that although he is a member of a FOA, this is not stopping him from selling to other companies:

So now when we have been selling, we are members of Mellanskog [FOA], but we have actually sold to Korsnäs [a forest company] the latest and we got over 100 SEK more [SEK/m³] and that was over 10 000 cubic meters and you can figure out what that means. One million SEK more with Korsnäs than with Mellanskog. (Örjan)

This means that even if several of the forest owners think that members of a FOA are selling their wood only to the FOA, this is not in the case among the interviewees.

Among the interviewees, there are specifically three of the forest owners, Frida, Örjan and Tomas, that express critique against the FOAs. As seen in the previous sections, these forest owners also frequently go against the storylines about the role of the forests in the bioeconomy articulated by the FOAs. Important to note is that two of the forest owners doing so are still members of FOA. Frida talks about being reluctant to the management methods presented by the FOA:

And then I talk to them, who are even more competent than me within certain areas, and then they often question the wood prices, how one does, how one should plant. And that I have noticed, that now when I am taking more initiatives of my own in the forest, then one has more direct contact with the Southern Forest Owners [FOA], with the wood buyers. And then I think I have received a little resistance when I do not only want to plant spruce for example. That kind of things that I can start to question about how they work and think. (Frida)

Örjan is more outspoken than Frida in his criticism of the FOAs. Apart from being skeptical about the management methods that he thinks that the FOA represent, he thinks that the FOAs benefit the forest industry rather than the forest owners. He says that: "The problem is that the relations between the ones that are buying and selling the wood through a Forest owner association is too tight." (Örjan)

Tomas's criticism is mostly focused on the forest management that he sees that the FOA stands for. In the interview, he connects the FOAs with the Swedish forestry sector as a whole and that he thinks are managing the forest in a non-sustainable way.

Tomas is explaining his decision not to be part of a FOA in the following way, referring to the type of guidance about forest management that the FOAs provide and that he perceive as advice that are responsive towards the needs of the industry rather than its member and that, as a result, neglects sustainability in favor for production:

I have been in a FOA, but I dropped out, actively. It was an active decision. I was incredibly disappointed. I dropped out about 10 years ago, that is when I realized that this is not working anymore. We need to get an update in the independent advice (Tomas).

As a consequence to their discontent, Örjan and Tomas together with other actors initiated a small forest owner organization that advocate alternative forest management methods and the perspective that the wood should be produced into more refined products to ensure a better price for the forest owner.

When analyzing the perspectives of all the forest owners in the study, it is striking that the reasoning behind membership or not in the FOA is similar for members and non-members. Most of the owners do not seem to pay any greater attention to if they are members of a FOA or not. The reasons for membership or no membership in the FOAs are mainly motivated by social or economic reasons and not because of different framings of how the forest should be used or managed. However, three of the forest owners express critique against the FOA in this aspects, but notable is that the critique is raised both by two forest owners that are members of FOA and one forest owner that are not. This speaks for the idea that formal membership in an FOA is not significantly linked to being part or not of a discourse coalition of the FOA supporting their storylines. Membership is rather a consequence of more coincidental, social and practical reasons. The discursive framing of the forest-based bioeconomy is thus not affected by this material factor, there are instead other reasons why discourse coalitions are formed.

7 Discussion

This essay is built upon the assumption that the FOAs are upholding a discourse that is in accordance with the dominant discourse of the Swedish forest industry and the state, a perspective that is based on the bioresource-centred bioeconomy in the EU (Hausknost et al, 2017; Fischer, Stenius and Holmgren, 2020). This assumption was strengthened in the analysis, where three storylines, complying with the hegemonic discourse evolved. In addition to the storylines, the relation between the bioeconomy discourse and sustainability goals stipulated in Swedish law was explored, together with the material aspect of FOAs membership.

The forest owners confirm the framing in the wider discourse, of the forest owner as a responsible actor in the forest management. The FOAs and the forest owners unite around a storyline that presume that the forest owners' opportunity to freely manage their forest this will be of benefit to both environment and to the society. The storyline supports and is supported by the Swedish tradition of 'freedom with responsibility' and rejects the need for regulation for the fulfillment of sustainability goals (Appelstrand, 2007). Several studies have found that this storyline is indeed represented in Swedish and EU strategies (Staffas, Gustavsson and McCormick, 2013; Kröger and Raitio, 2016; Hausknost et al, 2017; Fischer, Stenius and Holmgren, 2020). However, Ramcilovic and Pülzl (2016) that have analyzed the EU bioeconomy policy framework object to the claims of sustainability within the storyline. They argue that the discourse leans towards a weak sustainability approach where the focus is on strengthening the forest sector and improving an increased production of biomass, with the consequence that sustainability is only indirectly addressed (Ramcilovic and Pülzl, 2016).

In the storyline presented in 6.2, active forestry is emphasized as a feature of importance for the forestry, both by the FOAs and the forest owners. This is an example of where actors unite around a common story line but that they do so with different understandings of what is meant by it. The FOA motivates an active management for leading to increased productivity, thus 'active management' means actively managing the forest for maximizing productivity. This way of motivating active forestry aligns with the overall European bioresource-centred discourse, where production is the main focus. Fischer, Stenius and Holmgren (2020) make a similar observation of the role of the active forestry as an important part of a discourse where productivity is in focus in their study of the Swedish National Program. This is supported by Kröger & Raitio (2016) that looks on the Finnish national forest policy, where they claim that this bioeconomy discourse is used to promote traditional timber production while the underlying conflict between production and environment is not addressed. In contrast, the forest owners have a broader conceptualization of active management including a

sense of that it feels good to have a tidy forest, active management for biodiversity, or simply because of tradition. The notion of an *active* management is however all through perceived as positive feature of forest management by all the actors.

In the third storyline, new forest-based products are situated as a central aspect of the bioeconomy. This storyline further accentuates the link between the discourse upheld by the FOAs and the general bioresource-centred discourse. This storyline emphasizes the role of the forest in replacing non-renewable products and thus creates a strong link between production (of forest-based products) and climate. By introducing climate as an important part of the story, the other environmental aspects stand back. This storyline is however not supported by the forest owners in the same way as previous storylines. Instead, it is evident that the forest owners are not so familiar with the new forest products, although they are tentatively positive towards the potential of new products. Instead, the forest owners are more focused on traditional forest products. The fact that the FOAs' focus appear to be different from the forest owners suggests that the discursive framing of the concept of bioeconomy is not fully established. Hausknost et al (2017) who are studying the concept of bioeconomy by examining policy documents of several different countries and interviewing stakeholders, points out that there are indeed a considerable gap between how different actors understand the bioeconomy and suggest that this highlights the importance of an inclusive discussion of what the bioeconomy should imply. Potentially such discussion would result in alternative and diverse interpretations on what the concept of bioeconomy should be focused on in order to be of benefit for the society.

Moreover, the role of the climate in the discourse upheld by the FOAs becomes even more central in the way that the discourse is positioned in relation to sustainability, as explored in section 6.4. The FOAs are presenting the bioeconomy as sustainable and consequently, they claim that the concept of bioeconomy adheres to the Swedish goals set in the Swedish Forestry Act. One of the ways in which the FOAs strengthen this framing is by translating environmental issues to refer solely to the climate issue. By focusing on the climate issue and climate mitigation, it is possible for the FOAs to describe intensive forestry as the most environmentally friendly forestry and play down negative effects of such intensive forestry on biodiversity. The forest owners on the other hand do not confirm this perception of sustainability or the narrow framing of climate change mitigation. When they are asked to talk about issues of sustainability in relation to the forest they rather focus on issues of biodiversity and worries around future negative effects related to climate change on their forest production, such as storms or invasive species affecting production. The fact that some of the forest owners are concerned about the climate change because

of its effects on production are in line with how the FOAs link climate to production. However, it is notable that the dominant discourse of the bioeconomy as supported by the FOAs are silent on the issues of climate change, in favor of solely focusing on the positive effects of climate change and the role that forest play to impede the climate change. The framing of the productive forestry benefiting climate change through carbon mitigation, where issues of climate risks and biodiversity are omitted is very similar to the examples found in the literature, where sustainability is assumed to be a part of the bioeconomy, but where environmental and social implications of the bioeconomy are not followed up nor addressed in practice. This is in line with the findings of Staffas, Gustavsson and McCormick (2013), that in their overview of American and European bioeconomy policy, finds that sustainability and resource availability is only marginally addressed in the policy documents while continuous economic growth and transition away from fossil fuels in focus and assumed to be combinable. In Kröger and Raitio's (2016) study of the bioeconomy in the Finnish context, it is found that while the dominant actors in the forest sector upholds the idea that the forest can provide more of everything, the general public is in similar ways as the forest owners in this study, concerned about how issues of nature conservation, biodiversity and recreation will be addressed within the bioeconomy. Hausknost et al (2017) similarly points out that the forest is put forward as a key solution for tackling the climate change in the Finnish policy context just as well as in the European context, where the issues of biodiversity and nature conservation are put aside.

Membership in the FOAs seems to be of little importance in determining whether the forest owners confirm or challenge the discourse upheld by the FOAs. This suggests that the study of discourse coalitions is a relevant way of understanding how bioeconomy is approached by the stakeholders in the Swedish forest sector. This study shows that the forest owners who are members of a FOA are a diverse group with different interests and visons of their forestry. The fact that the FOAs are set to represent such a diverse group of forest owners with different frames of reference implies that stories and storylines are central to establish coalitions (Hajer, 2009).

On a concluding note, the perspective that evolves throughout the analysis of the discourse upheld by the FOAs depicts a discourse coalition that is in line with the European and Swedish hegemonic discourse as described by Fischer, Stenius and Holmgren (2020). However, the fact that the forest owners represented in the study had a partly contrasting discursive framing of issues relating to bioeconomy, suggest that a more open discussion would be preferable. According to previous studies on EU strategy and strategy for the Swedish NFP, few stakeholders have participated in forming the discourse around the bioeconomy (Kröger and Raitio 2016; Hausknost et al, 2017; Fischer, Stenius and Holmgren, 2020). Furthermore, Johansson (2016) argues that the Swedish

forest sector is consensus orientated, which even more emphasize the need for new processes where different perspectives can be taken into account. Hausknost, et al (2017) argue that there is a gap between visions stated in policy papers and the visions from stakeholder, something that is confirmed in the results of this study. Therefore, an open discussion about the concept of bioeconomy would be preferable in order to enable a democratic and open development of the concept. The need for a discussion where diverging opinions of how bioeconomy is defined and what a sustainable forestry implies are highlighted, rather than compromised, would visualize the positional statements necessary to challenge and diversify the dominant discourse. Since Swedish forest owners constitutes a diverse group, there is potentially a variety of discursive framings of the concept of bioeconomy that should be brought to attention and further discussed.

8 Conclusion

By studying the concept of bioeconomy as perceived by the FOAs and forest owners respectively, mainly two conclusions can be drawn. Firstly, the FOAs uphold a perspective on the bioeconomy as a concept that combines productive forestry and climate mitigation, a discourse that is linked to the bioresource-centred perspective upheld in the EU and in Sweden. It is a discourse where the bioeconomy to a large extent is focused on the production opportunities that can be associated with the concept, such as the new forest-based products. Furthermore, this discourse assumes that production is possible to combine with sustainability, while largely neglecting the social and environmental aspects of sustainability in the forestry. Secondly, although the discourse upheld by the FOAs were in parts confirmed by the forest owners, the forest owners appeared to hold more diverse perceptions of forestry. The environmental and social aspects of the forestry are to a larger extent emphasized by the forest owners represented in the study. The forest owners were in general more critical to the possibility of combining all three dimensions of sustainability in active forestry and they were more focused on traditional forest products than new innovations. Whether they were members in a FOAs appeared to be of little importance for how they viewed forestry and the concept of bioeconomy.

The essay shows that there are diverging perceptions of the concept of bioeconomy among the forest owners in Sweden, which means that the FOAs are not fully representing a common discourse for the whole group.

8.1.1 Further research

This study was conducted in the south of Sweden, constituting only a small sample of forest owners. This implies that the study only scratches the surface of what the forestry of Sweden is and that there are more stories to be told about the forest, and the forest-based bioeconomy.

I suggest that further research on the topic should study the framings of bioeconomy in other parts of Sweden. In the north of Sweden where the tenure structures are different, where large-scale forestry is more pronounced and reindeer herding is practiced, there are important perspectives to consider that are not covered in this thesis.

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11 Appendix 1

Quotes from the Result section (6.1-6.5) in Swedish

Page 20

"En trygg ägande- och brukanderätt ger trygga skogsägare som planerar långsiktigt och vågar göra de investeringar som inte bara är till nytta för skogsägaren, utan för hela samhället, klimatet och miljön." (The Federation of Swedish Farmers, 2018b)

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"Men man kan se lite olika statliga direktiv som varit genom tiden. 30-45 år sen så gjorde jag en ny skogsbruksplan. Då har ju jag en dunge här nere, som kallades 5:3 -skog och det var ju skog som man på den tiden skulle avverka och plantera gran på. Det är ju en sådan här riktigt fin dunge, med ek, asp, björk, gran. Skogsbetesdunge är det ju egentligen, det är lite luckor i. När vi fick den så sa (fru) direkt att det hugger vi aldrig ner. Nä, sa jag. Aldrig hugger vi ner det. Det är ju där vi har vår svamp. Det är ju nästan trolskt att gå där. Sen gick det ju 15 år så var jag ute där och tittade där vid, då blev det ju plötsligt nyckelbiotop - då var det plötsligt så värdefullt." (Ivar)

"I det så blir det ju väldigt lätt att allt ser likadant ut med. När man utgår från det så kanske man missar lite just vad som är specifikt för det område där man ska göra en åtgärd på då" (Finn)

"...jag har ju ändå någon gång skrivit på pappret om att det ska bli ett naturreservat och då får väl jag acceptera det och försöka förstå också. Det tycker jag är min skyldighet, att förstå vilka värden som finns där som folk ser och hur kan vi göra det bästa av det hela. " (Frida)

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"När det gäller storskogsbruket för där blir det ju väldigt ensidigt, ett tag. 70-talet tog man upp enormt stora hyggen, det gör man inte nu i samma utsträckning. .. Men det har ju egentligen inte förekommit i det här privata skogsbruket." (Ivar)

Page 23

"Vi anser att ett aktivt brukande med hög och uthållig skogsproduktion är ett effektivt sätt att bidra till lösningen på klimatproblemet." (The Federations of Swedish Farmers, 2013)

"I det praktiska skogsbruket finns följaktligen goda möjligheter och stort ansvar att genom skötsel påverka och öka inbindningen av koldioxid" (The Federations of Swedish Farmers, 2013)

"Aktivt skött skog får större tillväxt och binder mer koldioxid än avsatta naturreservat som lämnas till egen utveckling." (The Federations of Swedish Farmers, 2019)

Page 24

- "Jag har aldrig tänkt att skogen bara ska stå, det har jag försökt att lära mina barn med att skog ska skötas. För på lång sikt ger det mer pengar med skötsel, även att det är en del kostnader. Man ska röja, man ska gallra och plantera. Man ska inte låta det bara vara." (Ivar)
- "..det är ju snyggare att bo i en skog där det är snygga raka stammar och inte en massa rotvältor och avbrutna träd och sånt tycker jag." (Kalle)
- "Man blir rätt så skadad hur en skog ska se ut, jag nog väldigt estetiskt lagd. Att det ska se bra ut i skogen, och sen är ju det efter tycke och smak, vad som är snyggt och fint. En ovårdad skog är liksom lite jobbig att se" (Finn)

Page 25

"... idag så jobbar vi ofta mot naturen och inte med naturen. Ofta när man planterar gran då f kommer det naturligt ju upp jättemycket löv också. Så skickar du in någon med röjsåg som röjer bort alla där de lövträden som naturen vill producera. Det är ganska osmart tror jag." (Örjan)

Page 26

"När man tar hit allmänheten så tycker de om det här. De tycker att det är så snyggt. 'Wow, oj kolla alla de här blåbärsbuskarna - de är kvar. Och jägarna tycker att det är helt fantastiskt, vilken skog! Så helt plötsligt så, maskinkillarna de berättade att, en gammal maskinförare han sa att: "du, i hela mitt liv så har jag aldrig med min fru ut på något hygge, för det är inget man är stolt över. Men vet du vad? Det gjorde jag den här gången" (Örjan)

"Det är ju ett lärande. Jag har skogen för att lära mig och jag har också skogen för att jag känner att det är en sådan hård drift på skogarna idag så om jag kan äga skogar där jag ökar mångfalden så bidrar jag till det långsiktiga artbevarandet helt enkelt." (Tomas)

Page 27

"Vårt mål är ett resurseffektivt och biobaserat samhälle, där fossila och andra resurskrävande material ersätts av träråvara för stor klimatnytta." (The Federations of Swedish Farmers, 2013)

"mindre klimatvänliga" (The Federations of Swedish Farmers, 2019)

- "Allt som görs av olja går att göra av trä." (The Federations of Swedish Farmers, 2018a)
- "kan ersätta allt från olja och bomull till plast och betong." (The Federations of Swedish Farmers, 2018b)
- "ersätta mindre klimatvänliga råvaror" (The Federations of Swedish Farmers, 2019)
- "Växande skogar tar upp koldioxid från atmosfären och ger en förnybar resurs" (The Federations of Swedish Farmers, 2018b)

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"Jag tror trä är bättre, använda trä i så hög utsträckning som möjligt. Tydligen är det också så att träd kan också ersätta en del av plasten." (Tove)

"Ja, istället för att importera olja från Saudiarabien så kanske vi kan använda våran egen talltopp och göra drivmedel av." (Kalle)

"Om bara tänker rent ekonomiskt så får man ju bäst betalt från virke, alltså som blir timmer." (Frida)

"Vad jag skulle föredra att det blev? Det är väl högsta kvalitetstimmer." (Kalle)

Page 29

"Jag vill ju i första hand att det ska bli ett byggmaterial, jag tror att det är den största möjligheten. Kan de göra tallolja och grejer så är väl det bra. Men det blir ju säkert av de lite sämre kvaliteterna. Och det kan ju komma fram helt andra produkter, det vet vi ju inte." (Ivar)

"Men sen är det ju så att en del säger att du ska säkert satsa på det eller det, jag tror man måste satsa på det som marken passar till. Sen så hur priset blir om hundra år - det kan vi inte sia om." (Ivar)

"Det är klart att vi kan plocka ut lite mer grenar och toppar och stubbar och sånt där. Det kan väl ge en del och du skulle ju kanske kunna räkna in att vi kommer få ungefär 20 % mer tillväxt inom 30 år om man liksom räknar framåt. Men fortfarande: det räcker ju inte till att ersätta det fossila." (Örjan)

"Skogssektorn i Sverige använder begreppet bioekonomi vårdslöst. Ingen vet vad det är va. Det är precis som en ny term för evig tillväxt, det är vad det är. Det kan man översätta det med, lika med tron på den eviga tillväxten." (Tomas)

Page 30

"Med deras [privata skogsägares] hållbara brukande får vi fler kvittrande fåglar, mer klimatsmarta produkter och ökad välfärd på landsbygden" (The Federations of Swedish Farmers, 2019)

Page 31

"LRF verkar för en ökad förståelse för skogsägarens och den brukade skogens viktiga roll för att klara klimatomställningen och utveckla bioekonomin." (The Federations of Swedish Farmers, 2018b)

"Det känns som att ekonomiskt och hållbart ibland går hand i hand. Om man skulle skota ut virket istället för att en lastbil skulle hela vägen in och hämta det så blir det ju otroligt mycket mer drivmedel som behövs och det kör sönder otroligt mycket mer. Samtidigt som det blir ekonomiskt mer lönsamt för mig om jag har en väg som går hela vägen dit lastbil kan ta sig." (Frida)

"Ja, det [bioekonomi] är åter en sån där floskel. Rent teoretiskt, helt korrekt, men där ryms inte biodiversiteten om vi tar ett annat bi-ord." (Tomas)

Page 32

"Skogsskötsel med både klimatet och de biologiska värdena i beaktande går inte ihop alls, det är faktiskt så. Jag vet precis hur jag skulle göra om jag skulle producera 50 % snabbare träd på mina

marker, jag har råkoll på det. Men då kommer ju träden växa så fort att jag vet inte ens om jag får några häckande fåglar där." (Tomas)

"Jag tycker att jag har ett ansvar. Både att ha den kompetens som behövs för att förstå både det här med biologisk mångfald och liknande och inte tänka att en ren granskog är bra för alla arter och alla blommor och alla växter. För det är ju inget på marken när man går in i en sån skog, det är ju inget som växer där." (Frida)

"Att bygga i trä är ju fantastiskt om man kan hitta kvalitetsvirke, då är det ju bra om vi bygger med det och låter det liksom binda kol i långa perioder. Det tycker jag är bra, men vi har väldigt dåliga kalkyler på hur mycket det kan bli." (Tomas)

Page 33

"Det är ju folk som funderar [på hur man kan lösa problem relaterade till klimatet] det är väl det här som kommit in mycket att man ska blanda trädslag och liknande. För de kan skydda varandra i blåst men även i angrepp och liknande. Så mycket sånt har kommit in, sen vet jag inte om det finns forskning på det eftersom det är så pass nytt." (Frida)

"Det finns ju en förhoppning om att träden kommer växa lite bättre, men det är ju en stor oro för nya skador, nya skadeinsekter, nya stormar etc. så sammantaget är det ju djupt olyckligt att vi får ett förändrat klimat. Det finns ingen uppsida i det." (Örjan)

"Och sen att man när man avverkar tänker till lite innan man gör den, för jag ser ju det på förra avverkningen att det var rätt mycket träd som blåste ner i kanterna. Så det är ju något man måste tänka ännu mer på med klimatförändringarna." (Per)

Page 34

"Föreningarna ägs och styrs av sina medlemmar" (The Federations of Swedish Farmers, 2014)

"Ingen annanstans i världen har familjeskogsbruket spelat en så avgörande roll för utvecklingen av ländernas skogsbruk och skogsindustri som i Sverige och övriga Norden." (The Federations of Swedish Farmers, 2020)

"Ja, jag är med i Södra skogsägarna och har alltid varit det egentligen. Det är någon sånhär generationsgrej, Södra bygger ju lite på att det är över generationerna. Man ärver att man tycker om Södra, så morfar, mamma och sen jag. Det har kommit på köpet, korvgrillning och sånt där, södrakeps! De är bra på hela den där biten." (Frida)

"Jag är inte aktiv i någon skogsägarförening, men jag är med i Mellanskog. Jag är inte aktiv där i överhuvudtaget... Jag har ett konto sen min fars tid. Han vurmade för skogsägarföreningar, han vurmade för dom." (Tove)

"Nä. Nä, det finns inget svar på det. Jag är bara inte med helt enkelt. Eftersom pappa inte var med så har det inte blivit någonting." (Kalle)

"Vi är ju med i Mellanskog för att det kostar ju inget." (Örjan)

Page 35

"Jag är inte med i en skogsägarförening, i och med att jag jobbat på en såg. Egentligen har det ju hänt helt naturligt att jag inte är med, men jag skulle egentligen kunna vara med också. Jag känner ju igen många av deras inspektorer och varit med ute när de hjälpt grannar, så jag har ju haft lite insyn och lite rådgivare." (Ivar)

"Det har inte blivit av (att vara med i en skogsägarförening) det är inte den omfattningen heller och sen känner jag lite såhär också att när vi skulle göra den här avverkningen, då offererade jag ju olika företag och den som gav bäst anbud fick ju genomföra. Det skiljde jättemycket. Det gjorde det. Hur fick du den idén att skicka ut offerter. Det skiljde ju 100 000. Men jag tror inte att andra gör som jag gör, av tradition." (Per)

"Så nu när vi har sålt, vi är medlemmar i mellanskog, men vi har faktiskt sålt till korsnäs nu senast och vi fick över 100 kr mer (per kubik) och det var över 10 000 kubik och du kan räkna ut vad det betyder, en miljon kronor mer med Korsnäs än med Mellanskog." (Örjan)

Page 36

"Och då pratar jag ju med dem som är ännu mer kompetenta än mig inom vissa områden och då ifrågasätter de ofta virkespriser, hur man gör, hur man ska plantera. Och det har jag märkt nu när jag tar mer egna initiativ i skogens så har man ju en egen kontakt i Södra med virkesinköpare. Och då tycker jag att jag har fått lite motstånd när jag inte bara vill plantera gran till exempel, sådana grejer som jag kan börja ifrågasätta om hur dom jobbar och tänker." (Frida)

"Problemet är att relationerna mellan de som köper och säljer virket i genom en skogsägarförening är för tajta." (Örjan)

"Jag har varit med i en skogsägarförening men gick ur, aktivt. Det var ett aktivt beslut. Jag var otroligt besviken. Jag gick ur för typ 10 år sen, det var då jag på allvar insåg att det här håller inte längre. Vi måste få ett omtag i den oberoende rådgivningen." (Tomas)