



# **Trust within small-scale forest management - A local case study in Southern Sweden**

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Supervisors: Vilis Brukas

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Swedish University of Agricultural Sciences

Master Thesis no. 215

Southern Swedish Forest Research Centre

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## Abstract

In the forest sector, non-industrial private forest (NIPF) owners commonly interact with numerous stakeholders (e.g. forest managers, timber buyers, harvesting contractors and advisors) for counseling, planning, selling and hiring. Forest management is therefore built and influenced by the relationships between NIPF owners and other stakeholders. In the local context of a Southern Sweden, the Swedish Forest Agency (SFA) and the Southern Forest Owners Association (SÖDRA) are very influential stakeholders in small-scale forest management. Based on qualitative interviews and by means of grounded theory, an analysis of the relationships between NIPF owners and the mentioned organizations was carried out in order to understand the social context at the genesis of forest management decisions. The most significant features found in the field were: i) strong and trustful relationship between NIPF owners and SFA; ii) trustworthy behavior of SÖDRA during hard times; iii) SÖDRA is driven by industrial and not NIPF owners' best interests; iv) entrepreneurs can be trustworthy actors; and v) centralization of institutions, lack of time of officers and communications barriers influence negatively the relationships NIPF owners-other stakeholders. The results show how public and private customer-related working practices affect NIPF owners' relation to e.g. advisors, buyers and contractors; and trigger specific perceptions of institutions. Although, deterioration of relationships in a local context might not seem influential to the larger forest industry as SÖDRA, the sum of such small pressures weakens the social domain of the forest sector, thus setting hurdles to participative forestry governance.

**Key words:** Forest owners associations, social capital, trust, NIPF owners, southern Sweden.

## Sammanfattning

Småskaliga skogsägare (SSÄ) interagerar ofta med många intressenter, såsom skogsbrukare, timmerköpare, entreprenörer och rådgivare. Kontakten sker av olika skäl, bland annat för rådgivning, planering, försäljning och uthyrning. Skogsförvaltning är därför uppbyggd och påverkad av relationerna mellan SSÄ och dess intressenter. I en aktuell Småländsk fallstudie har Skogsstyrelsen (SKS) och Södra skogsägarna (SÖDRA) visat sig vara mycket inflytelserika aktörer inom det småskaliga skogsbruket. En analys av förhållandet mellan SSÄ och de nämnda organisationerna genomfördes för att få en bättre förståelse för den sociala kontexten som uppstår vid möten och beslutsfattande kring skogsskötseln. De viktigaste resultaten var: i) det finns en stark och förtroendefull relation mellan SSÄ och SKS, ii) SÖDRA hade ett trovärdigt beteende under besvärliga tider iii) SÖDRA representerar industrin och inte SSÄs intressen, iv) entreprenörer kan vara tillförlitliga aktörer, och v) centralisering av institutioner, tidbrist samt kommunikationshinder påverkar relationen mellan SSÄ och intressenterna på ett negativt sätt. Resultaten visar hur offentliga liksom privata kundkontakter påverkar SSÄs relation till bland annat rådgivare, inköpare och leverantörer samt att de skapar värderade uppfattningar om institutioner. Även om en försämring av relationer i ett lokalt sammanhang inte verkar ha betydelse för en stor industri såsom Södra så försvagar ändå sådana små påtryckningar det sociala samspelet inom skogssektorn. Följaktligen utgör detta ett hinder för delaktighet och förtroende inom skogsskötsel.

**Nyckelord:** Skogsägarförening, socialt kapital, förtroendet, småskaliga skogsägare, Södra Sverige.

## Resumen

En el sur de Suecia los pequeños propietarios forestales (PPF) interactúan habitualmente con varios actores del manejo forestal (planificadores, compradores de madera o contratistas de cosecha) por diversos fines (asesoramiento, planificación, venta y contratación de servicios). Por lo tanto, el manejo forestal sueco se constituye en torno a las relaciones entre los PPF y aquellas partes interesadas. En un caso de estudio local, la Agencia Forestal Sueco (AFS) y la Asociación de Propietarios Forestales del Sur (SÖDRA) son los actores más influyentes en la gestión forestal de pequeña escala. Por consiguiente, con el fin de comprender el contexto social de la toma de decisiones del manejo forestal se analizaron las relaciones entre propietarios y las dos organizaciones mencionadas. Los resultados más relevantes fueron: i) existe una relación de confianza entre los PPF y la AFS, ii) el comportamiento de SÖDRA en tiempos de calamidad lo hace digno de confianza; iii) SÖDRA representa la industria y no el interés de los propietarios; iv) los contratistas presentan características dignas de confianza y v) la centralización de las instituciones, la falta de tiempo de los funcionarios y las barreras en la comunicación menoscaban las relaciones. Los resultados muestran como las prácticas de AFS y SÖDRA afectan el modo en el cual los PPF se relacionan con asesores, compradores y contratistas, de tal modo adoptando diversas percepciones sobre las instituciones. Aunque el deterioro de las relaciones en el contexto local no es capaz de influenciar la gran industria forestal presente al sur de Suecia, la suma de estas pequeñas presiones debilita el contexto social del sector forestal, creando en consecuencia, obstáculos al manejo participativo de los recursos forestales.

**Palabras clave:** Asociaciones de propietarios forestales, capital social, confianza, pequeños propietarios forestales, Suecia.

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### List of abbreviations

NIPF	Non-industrial private forest
SFA	Swedish Forest Agency
SÖDRA	Southern Forest Owners Association
FO 3, FO 8, FO 10, etc.	Forest owner respondent codes
S1, S4, S10, etc.	Stakeholder respondent codes
INTEGRAL	Abbreviation of the EU-funded research project “Future-oriented integrated management of European forest landscapes”

# 1. Introduction

## ***1.1 Social research in small-scale forestry***

Swedish forestry would be halved without the input of non-industrial private forest (NIPF) owners. According to Fischer *et al.* (2010) and Kleinschmit *et al.* (2012) small-scale forestry has only been an important theme within Swedish forestry research for the last two decades, but if non-peer reviewed sources are taken into account NIPF were an object of study even before. Numerous important aspects of small-scale forestry have been studied as e.g. behavior and driving forces of forest owners (Törnqvist, 1995); ownership issues across generations (Lönstedt, 1997); owners objectives in relation to natural values and other amenities (Hugosson and Ingemarson, 2004); the factors influencing forest owners decision process (Ingemarson, 2004; Hysing and Olsson, 2005); scope of different goals of the forest owners and identified owner typologies (Ingemarson *et al.*, 2006). Nevertheless, not much has been researched about relationships between forest owners and other forestry stakeholders (Fischer *et al.*, 2010; Kleinschmit *et al.*, 2012).

Looking back at the research carried out on small-scale private forestry, a shifting trend can be drawn. First, research moved from a quantitative towards a more qualitative methodological approach. Second, smallholdings were considered rational enterprisers previously, while most recently they are conceptualized as multi-objective persons, attached to family and cultural values. Accordingly, previous studies focused on economics, silvicultural and managerial issues; while more recently they shifted to forest owners' values, objectives and decision-making in complex social-ecological systems (Fischer *et al.*, 2010).

Fischer *et al.* (2010) emphasize the significance of developing social research around NIPF owners. Especially, they put forward the relevance of existing social theory in shedding light on the individual forest owner as a component of a larger system as, they claim, theoretical foundation is lacking in most of the research on small-scale forestry. Additionally, Felton *et al.* (2010) stress the importance of further understanding of relationships between forest owners and forest consultants; as such relations can be conflicting, consequently hindering climate change vulnerability reduction within the sector. Moreover, Korhonen *et al.* (2012) also highlight the importance of investigating forest owners' social networks, trustees and the relevancy of those social relationships to the activeness of forest owners. Consistently, this study uses theories of social capital to study trust relationships among NIPF owners and other actors in the context of forest management.

For that purpose, the present master thesis analyses NIPF owners' relationships with institutions, using a case study of Småland in Southern Sweden. This research was carried out within the framework of the research project INTEGRAL.\*

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\* INTEGRAL (<http://www.integral-project.eu>) is an EU funded project geared towards forest policy improvement on a landscape scale through a stakeholders approach. INTEGRAL is carried out by universities and R&D institutes in 20 study cases throughout Europe.

In the local context of Southern Sweden, the Swedish Forest Agency (SFA) and the Southern Forest Owners Association (SÖDRA) are influential stakeholders to small-scale forest management. SFA represents the State forest authority, whose goal is to fulfill the objectives defined in the Swedish forest policy, by means of “provision of advice and information, routine controls to monitor the compliance of statutory requirements, and administering subsidies to forest owners” (Swedish Forest Agency, ND). Thus, SFA is substantially present in the social domain of the forest sector. Southern Sweden forest landownership is heavily dominated by NIPF owners; most of them are members of the long lived forest owners associations, namely SÖDRA, which is a powerful stakeholder in the local forest sector.

### ***1.2 Aim and research questions***

This study aims to disclose the relationships between NIPF owners with both the SFA and SÖDRA, in a local context. In order to fulfill such aim, this study will be guided by the following research questions.

- How do forest owners experience contact with the SFA and SÖDRA?
- How is the trust built and manifested between forest owners and SFA and SÖDRA?
- Which actors are most trusted by the forest owners?
- Why do owners trust that specific organization?

## 2. Conceptual background

### 2.1 Social capital and trust

Different forms of capital play an important role for the creation of societal wellbeing. The usual capital forms that come to mind are the most visible ones: physical and economic capital. Other intangible forms of capital, as social capital, are also important to welfare (Svendsen and Svendsen, 2009). Accordingly, forest social-ecological systems are not only influenced by the amount of physical capital (e.g. timber resources and infra-structures) and economic capital; but indeed also shaped by the actual social capital.

Social capital is the amount and quality of cooperation and networks that exist in societal structures. (cf. Putman, 2000 or Coleman, 1990). Social capital as explained by Svendsen and Svendsen (2009) is operationalized in trust which is studied from three main fields: economics (transaction costs), political science (institutions) and sociology (norms).

Putman (2000) presents two kinds of social capital: bridging and bonding (see figure 1). Bridging social capital refers to thin trust, within inclusive networks; whereas bonding social capital is presented as thick trust among closer networks. Bridging social capital is normative, measured usually as *generalized trust* and bonding social capital is associated with information, experience and economic rationality, thus namely linked to *particularized trust*.

Trust is the relationship when a 'trustor' (the one giving trust) relies on actions, directed to the future, of a 'trustee' (the trust receiver). Hence by trusting, the trustor loses control and must face the uncertainty of the actions that the trustee will take (Uslaner, 2002). Nooteboom and Six reflect: "we trust someone (...) if we expect him not to be opportunistic even if he has both the opportunity and the incentive to do so" (2003: 4). Trust is what makes society function; without trust we could not be able to interact with others. Trust is the basis for the *leap of faith* that helps us to take on new relationships in an uncertain future (Möllering, 2006). Depending on the relationship between trustor and trustee we can talk about generalized trust or particularized trust (Uslaner, 2002).

Generalized trust refers to the trust we have to society in general and is based on the expectation of shared "fundamental moral values" (Uslaner, 2002: 18); accordingly, you can trust people you have never met. But at the same time, divisions in class, ethnic or race diminish generalized trust (Uslaner, 2002). Indeed, societies closer to the ideal welfare state model, as the Nordic countries (where the thought that *you can trust most people* is more common), show higher levels of generalized trust; *ergo*, are richer in social capital (Rothstein, 2009).

Particularized trust is based on our previous experiences and the knowledge we have regarding the trustworthiness of the trustee (Uslaner, 2002). Particularized trust is also rational: whereas you trust, or not, rests on the expected, positive or negative, outcome of a specific interaction (e.g. the English saying: "fool me once shame on you, fool me twice shame on me"). Moreover, committed personal connections are powerful ways of building trust (Swain and Tait, 2007; Hardin, 2001).

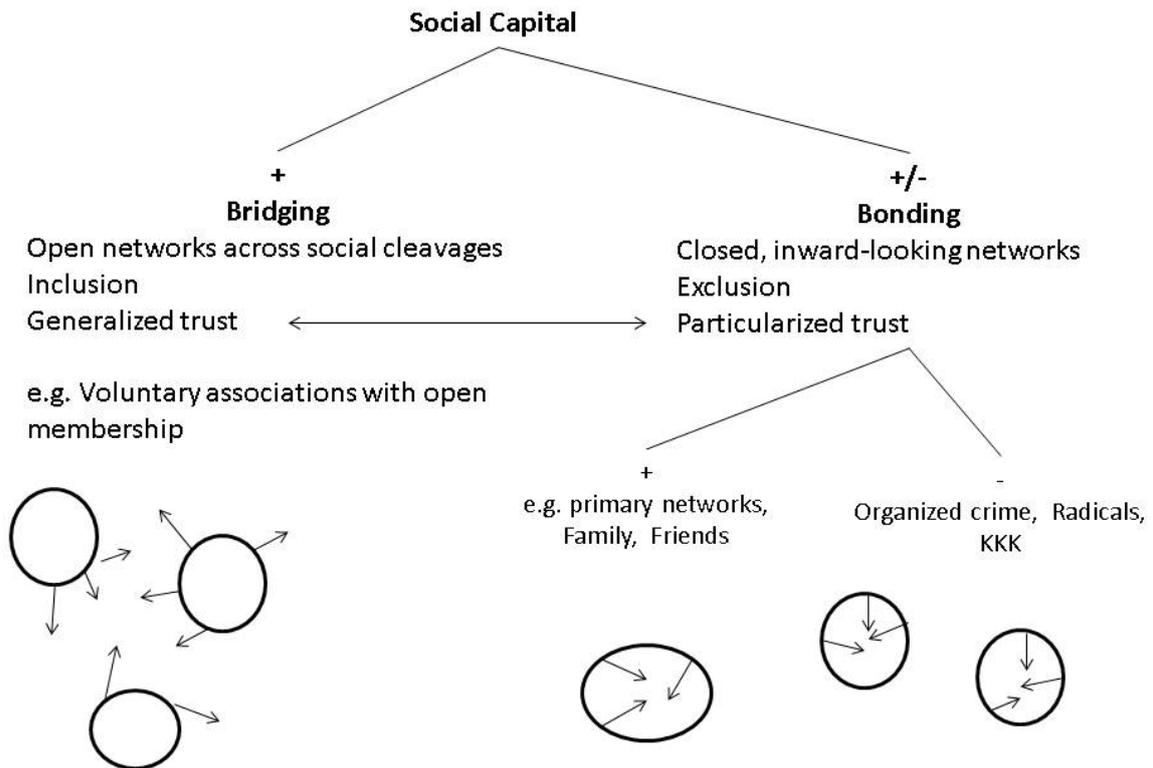


Figure 1: Bridging and Bonding Social Capital. Source: Svendsen and Svendsen (2009:9).

Nooteboom and Six (2003) name three important aspects of trust. Firstly, *competence* refers to the technical, cognitive and communicative abilities of the organization receiving the trust. Secondly, *intentions* relate to the degree of opportunism, or the lack of it, that a trustee has. Thirdly, *honesty* is the fact of being truthful by accepting responsibilities and mistakes, hence avoiding being perceived as opportunistic.

## 2.2 Social capital and forestry

Forest social-ecological systems have been studied from the social capital lens by focusing on social networks, relationships and trust. Following are examples of the range of studies that highlight the importance of social capital in the increased wellbeing of societies related to forestry.

In Norway, Vennesland (2004) presented the role of networks to the success of small forest enterprises. Rico *et al.* (2012) focus on productive networks in rural communities of Mexico, as generators of collective action and governance of common resources. Paletto *et al.* (2012) disclose the role of networks for forest landscape planning in the context of Southern Italy.

The significance of good relationships between local communities and forest officers (Smith, 2012; Hyakumura and Inoue, 2006) are other important factor influencing social capital. In Finland, Korhonen *et al.* (2012) show the cruciality of timber buying companies and forest management associations to keep and foster their relationships with committed customers. Relationships based on trust play as well a key role in community based conservation models (Baral, 2012). Trust is also

essential for increased participation in joint forest management and water protection (D'Silva and Pai, 2003), and in multifunctional forestry within multi-ethnic communities (Bizikova *et al.*, 2003).

Having considered the context of our study case (a small rural community in a Nordic country) and the theoretical framework of social capital, it can be assumed that bridging social capital is represented by a high number of networks among stakeholders. Even though these are very important, they are outside of the scope of this study, which focuses on the interactions between forest owners and other stakeholders. Hence, the main aspects of social capital that will be studied are regarding bonding social capital: i.e. experiences, relationships, and perceptions that affect the particularized trust.

### ***2.3 Relationships within forestry***

Relationships between forest owners and forest managers are important to the fulfillment of the objectives of forestry management, at several levels e.g. household, regional and national goals. Yet, in order to achieve a good and trustful relationship, the following main aspects are to be looked upon empirically: the qualities of communication; presence of personal contact; and lack of opportunism. The choice of these indicators is based on previous studies that had singled out their centrality to successful forest management.

A Finnish study by Hujala and Tikkanen (2008) on communication between forest owners and forest officers' points out that trust in advisors is vital for proficient communication regarding decision making, and face to face interaction is significant for the success of communication and for building trust; hence, trust and communication reinforce each other.

The Swedish Forest Model is grounded on the principle of freedom under responsibility: i.e. forest owners can manage their holding based on their decisions and not always following a rulebook as in other countries - e.g. Lithuania (Brukas and Sallnäs, 2012). Hence, optimal forest management should not merely work according to guidelines and experience, but also take into consideration personal objectives and views of the forest owner. However, Kindstrand *et al.* (2008) show that forest managers have different understandings of what forest owners have as objectives; hence with the aim of fostering trust, forest officers should be able to reflect on the owners' views. Conclusively, in order to ensure a proficient relationship several factors are needed: 1. Smooth communication (Hujala and Tikkanen, 2008); 2. Understanding of local situation (Baral, 2012) and celebrating the local identity (Smith, 2012); and 3. Knowledge about and taking regard of the owners' objectives and attitudes (Kindstrand *et al.*, 2008).

### ***2.4 Owners and Officers***

Different types of people rely more either on generalized trust or on particularized trust (Uslaner, 2002). Although this study focuses on particularized trust other factors influence trust building, namely the diversity of forest owners and forest officers. Diverse types of forest owners trust a variety of stakeholders (Hujala and Tikkanen, 2008) and passive owners and conservationist are difficult to convince (Ingemarson *et al.*, 2006). Forest owners in Helge Å show diversity in their values (Richnau, 2008) and several owner typologies have been identified (Edwards *et al.*, 2013) thus making trust garnering owner-dependent.

Brukas and Sallnäs (2012) found two types of planners: non-advisory planners and advisory planners. Non-advisory planners spend shorter times in contact with forest owners. Advisory planners, on the other hand, see their representative role as a clue to “nurturing successful long-term relationships” essential to their organizations goals: “promoting state policy implementation (for the SFA), or securing timber procurement contracts (for Sodra)” (Brukas and Sallnäs (2012:610).

### 3. Study context

#### 3.1 Case study area

On the basis of the characteristics of a typical southern Swedish forest landscape the study area chosen by INTEGRAL researchers was Helge Å, in Southern Sweden. The locality of Hallaryd was then selected to serve as a ‘landscape laboratory’ (figure 2).

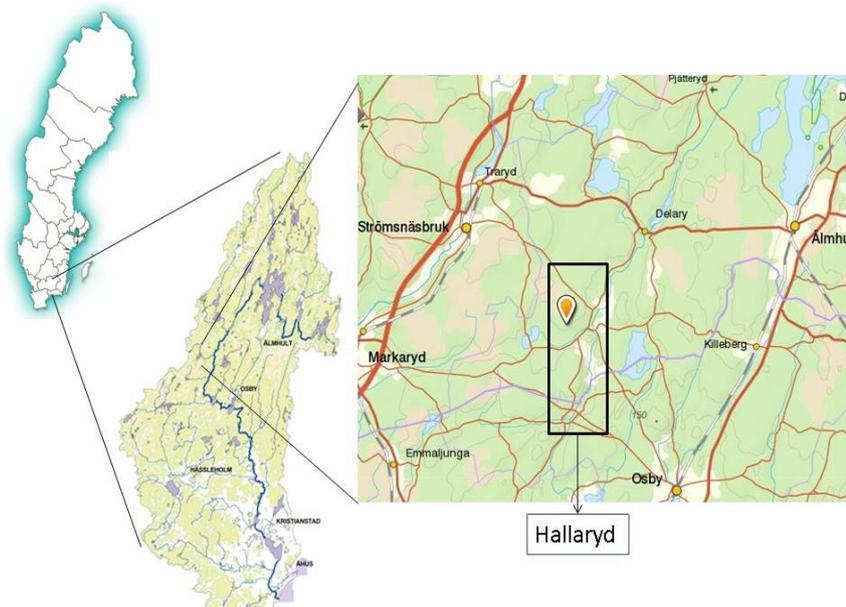


Figure 2. Relative location of Hallaryd. From left to right: Sweden, Helge Å Basin, and Hallaryd ‘landscape laboratory’ marked in a square. Images from Kebnekaise.net (ND), Kristianstads Kommun (ND), Lantmäteriet (2013).

Helge Å case study area is mostly composed by production forest (circa 80%) of Norway spruce mixed with minor amounts of broadleaf forests. Forests are mainly property of small scale private landowners: just around 20% of forest is owned by the church, state and private companies (Edwards *et al.*, 2013). These characteristics serve the purpose of establishing Hallaryd as a ‘landscape laboratory’ that would enable a deep analysis of social-economic factors and distinguish informal relations in complex social landscape with numerous private estates (Edwards *et al.*, 2013:3). During the last 60 years, Hallaryd has experienced a diminishment in population and services. Healthcare, food stores, gas stations and other services have moved as migration to nearby cities accelerated. The remaining economic activities include a small-scale furniture company, farmers, tourism and recreation oriented entrepreneurs and forestry entrepreneurs (Edwards *et al.*, 2013). In Hallaryd, several actors play a role within forest management. SFA and SÖDRA were already mentioned as the most influential stakeholders, yet other important actors are the forest companies VIDA, SYDVED and

ATA timber. Moreover, stakeholders as Kronobergs Administrative County Board, Environmental Protection Agency, Hunting associations and several NGOs represent further aspects related to forestry (e.g. environmental conservation, hunting, fishing and recreation).

### **3.2 Swedish Forest Agency**

SFA has an important role in forest policy and practice. SFA main roles comprise supervision, advice and support, inventory of the forest resources, statistics, raising awareness of forest values, and the provision of products and services to clients, which include green management plans, courses, assistance with valuations, planning of forest roads (Skogsstyrelsen, NDa). These duties are carried out by different staff positions in each SFA office. In the present study, the different job positions behind these tasks are referred generalized as “forest officers”, but they include planners, field inspectors, district chiefs, among others.

The SFA headquarters are located in Jönköping, although it has circa 100 offices throughout Sweden. SFA is organized into 5 regions, however SFA tasks are mainly carried out by districts that, in turn, are locally represented by so-called local offices (Skogsstyrelsen, NDb). Encompassing 640,000 ha of forest Kronoberg district covers the INTEGRAL case study area. Älmhult, one of the district’s five local offices, serves the Hallaryd landscape laboratory. In contrast to other districts, Kronoberg’s SFA has kept more offices thus enhancing the local presence (Edwards *et al.*, 2013).

### **3.3 SÖDRA**

Shared problems yield union and reliance on each other to work together for a common benefit. This cooperation was the context for the creation of forest associations in Sweden. During the 1920’s and 1930’s forestry did not provide sufficient incomes to landowners (SÖDRA, 2013a), besides new industrial structures in Sweden did put NIPF owners in a weak position against a strong forest industry; these factors, provided the foundation of SÖDRA in 1938 (SÖDRA, 2013a). Through 75 years history, SÖDRA has grown thanks to several important fusions with other owner associations (in 1953, 1964, 1976, 1992, 1999 and 2007) extending itself to the whole geographical area of Götaland (excluding Gotland) and reaching more than 50.000 forest owners as members and co-owners (SÖDRA, 2013b).

After WWII, firewood demand had fallen, bringing difficulties to the forest sector. Consequently, SÖDRA decided to invest in the pulp industry. The first pulp mill was opened in Mönsterås, 1958. The following 50 years saw the establishment of new plants; making SÖDRA the third largest producer of paper pulp in the world (SÖDRA, 2013c). The industrial component of SÖDRA includes as well numerous sawmills: the first one was Hallabro, in Blekinge bought year 1943. Other important sawmills are those in combination with the pulp mills of Varö and Mönsterås. The development of SÖDRA’s sawmills branch has made it one of the biggest in Sweden, with a capacity of 1,7 million m<sup>3</sup> of timber in 2013 (SÖDRA, 2013d).

SÖDRA’s development as one of the largest corporations in the forest sector plays a crucial role for trade and for the industry of the region. SÖDRA’s primary role is geared towards the NIPF owners, with the goals to i) secure a functioning timber market were members can sell their timber at fair prices; and ii) improve the individual monetary value of the members’ holdings by means of

assistance in finances, planning and management (Berlin *et al.*, 2006). Serving both forest owners and the industry is a challenge in the dynamic world of timber markets.

SÖDRA possesses a variety of personnel working with forestry operations (SÖDRA, 2013e), the most important ones are the so called “inspectors” which main duties is the timber procurement for SÖDRA’s industries.

## 4. Methods

### 4.1 Study approach

The present study revolves around social aspects in the forestry sector. The most relevant methodological choice was deemed to be a qualitative approach. The chosen design allowed grasping, describing and analyzing the social setting of Hallaryd: it facilitated personal contact with actors, bringing closeness to their perceptions. The study was conducted through the following steps: literature review, gathering of empirical data and their analysis.

The literature review helped to define an appropriate methodology and to find a proper theoretical background. Empirical data was gathered through interviews giving numerous examples of the experiences within formal and informal networks in and around Hallaryd. Analysis of transcripts (described further below) was as well a key step in the present study.

The steps undertaken by the author of this thesis included the design of the analytical methodology, the literature review and the analysis of the empirical data. Previous steps as planning the study design and the interview process were carried out by researchers from SLU working within INTEGRAL. However, all the methodological steps are explained in order to facilitate the execution of similar studies in the future.

### 4.2 Study population

The study population consists of NIPF owners with typical features for the Kronobergs county and stakeholders directly and indirectly related to forest management.

21 interviews were carried out with various stakeholders: SFA, County Administrative Board, Recreational and Outdoor associations, Hunters association, Local Heritage Association, Forest Owners Association, Pulp and Paper companies and national politicians. 15 interviews were conducted with forest owners (n.13) and forest managers (n.2), with different educational background and diverse usage of their forestlands (Table 1). The holdings of each respondent varied from only 35 ha to 534 ha (Table 2), average property size was around 75 hectares.

Table 1. Interview participants in Helge Å.

Respondent type	Total
Other stakeholders	21
Forest owners	12
Forest managers	3

Parameters of the research Project INTEGRAL deemed 15 interviews as a suitable number for a qualitative study. After a deep scrutiny of the empirical material it can be concluded that a saturation

point (i.e. when additional interviews give little extra information (Schutt, 2006), was reached by the amount of interviews carried out by the SLU research team.

A ‘gate keeper’ facilitated contact with the participants, in this case it was a local officer from the SFA, viewed as neutral and trustworthy by the community, who provided the names of the first interviewees. Snowball sampling (Goodman, 1961) was employed subsequently.

Table 2. NIPF owner respondent code, property classes areas and SÖDRA membership.

Respondent code	Property area classes (ha)	SÖDRA membership
FO 101	0-49	YES
FO 102	0-49	YES
FO 103	100-500	NOT
FO 104	50-99	YES
FO 105*	>500	YES
FO 106	>500	YES
FO 107	100-500	YES
FO 108	0-49	YES
FO 109	100-500	YES
FO 110	50-99	NOT
FO 111	50-99	NOT
FO 112*	>500	YES
FO 113*	Unknown	-
FO 114	50-99	NOT
FO 115	50-99	NOT

\*FO 105, FO 112 and FO 113 work as forest managers, the area indicated is the one managed and not that of their property.

#### **4.3 In depth semi structured interviews**

The research instrument chosen was semi-structured in depth interviews as described in Kvale (2009). The direction of the interviews was defined by two interview guides developed by INTEGRAL for the case studies in Europe. SLU researchers translated the interview guides in to Swedish and made necessary adjustments to the case specific settings, developing supplementary in depth questions focusing on Hallaryd. The interviews related to different scales (local and national); time frames (past, present and future); objectives; and functions of forestry in Hallaryd. There were two interview guides as each focused on a specific group of respondents: i) Forest Owner/Managers and ii) Forest Stakeholders. Given that the INTEGRAL’s research scope is wide-ranging, the interview guides considered many factors; these are summarized in Table 3.

INTEGRAL’s aims are much larger than the present investigation. Therefore the vast empirical material gathered during the interview process was not fully used. However, much of the data collected served for the definition of the context of the forest owners, in other words the settings of the study case. Moreover, it was important to understand the current narratives in the study area (e.g. vulnerability to storms; owner’s values), and grasp whether owners relationships with associations and institutions played a role in the big picture.

Table 3. Information asked during the interviews

<p><b>i) Interview with Forest Owners/Managers:</b></p> <ul style="list-style-type: none"> <li>- General information about the property and interviewee (e.g. size, land use, types of forest, education level).</li> <li>- Objectives, functions, services and their importance of the forest owner/manager. Past experiences and future prospects.</li> <li>- Forest multifunctionality.</li> <li>- Forest management practices in Sweden, since WWII, changes, current trends, incoherencies and inconsistencies in forest policy, future changes.</li> <li>- Property specific management practices: management changes since the presence of the owner in the property, expectations of changes in future management, comparisons with surrounding owners, cooperation with other owners and stakeholders, views on owner organizations.</li> <li>- Ranking of the factors influencing forest management decisions.</li> </ul>
<p><b>ii) Interview with Stakeholders:</b></p> <ul style="list-style-type: none"> <li>- Actors and their networks: actors influencing landscape change, cooperation and conflicting positions with other actors. Past and expected relationships with other actors.</li> <li>- Power and change: Forest owners/managers autonomy in decision making, powerful organizations and actors, and two way influence on decisions.</li> <li>- Actor behaviors.</li> <li>- Social development.</li> <li>- Economic, Technological and Institutional Factors.</li> </ul>

Researchers from SLU conducted interviews during the fall of 2012. Interviews were recorded and notes were also taken during the interviews.

#### **4.4 Data analysis procedures**

The analysis procedures consisted of transcription, coding, categorizing, and theory building.

Each answer concerning each of the main questions present in the interview guide was transcribed into a sheet document. The layout of this document allowed easy and fast access to each of the answers from all interviewees. This process was carried out in Swedish. During transcription the interview was anonymized. Some of the data analyzed in this investigation is drawn from INTEGRAL sheet document, while others have been transcribed in a narrative form by the author of this thesis.

The data analysis approach was grounded theory: theories for explaining the social phenomena are produced in an inductive manner: i.e. explanations are mostly grounded on the empirical data (see Charmaz (2008) for a comprehensible explanation of the method). Grounded theory was selected as an analytical approach since it takes into consideration most of the material gathered and builds upon the findings. The selection of grounded theory intended to shorten the distance between myself and the case study, since I was not present during the interviews.

Coding of different recurrent topics and writing a codebook were done. Following, comparison and analysis of how categories represented short hand abstractions, factors or qualities served to develop the explanations of the issues investigated (Hennink *et al.*, 2011).

Subsequent to the inductive theory building, literature review aimed at finding correspondent and adequate theoretical underpinnings, and similar empirical evidence from case studies in Sweden and other regions.

Three steps were undertaken in order to validate the results of the study. First, comparing the developed theory to the empirical data to check, if it indeed reflected the perceptions of the interviewees (Hennink *et al.*, 2011). Second, the preliminary conclusions were presented to a group of the forest owners that participated in the interviews to ventilate their opinions in a group discussion. Lastly, a questionnaire with three broad open ended questions aimed at disclosing their agreement to the conclusion was given to various interviewees.

#### ***4.5 Ethical considerations***

The study was carried out in conformity with European guidelines for ethical research (CORDIS, 2010). Consequently, interview participants were sent a letter where the research group clarified the background of INTEGRAL, introduced the research team, explained the objectives of INTEGRAL, how forest owners/managers and stakeholders views were a key aspect for the research project, and finally a small description of the topics that would be appointed during the interviews. Furthermore, anonymity was guaranteed during the whole process of research and of any publication material. Participants were ensured that only the research group would be entitled to listen to the recordings of the interviews, and that all recorded material would be erased after all transcriptions were completed. Finally, by taking these aspects into consideration it was assured that personal views of each participant would be managed with integrity, in order to affirm their trust on the research team.

#### ***4.6 Data quality and study limitations***

The amount of data gathered by the research team was large, as interviews had a mean duration of more than two hours, and covered numerous topics of high importance to forest management. Furthermore, the interviews were detailed and treated on specifics about experiences and perceptions about the relationships in the local setting of Hallaryd, those two aspects give this study a solid empirical foundation. On the other hand, the breadth of the topics touched during the interviews did not include questions about the relationships and trust issues as such, yet those aspects were extracted from the narratives while interviewees responded to other questions. The indirect reflections can be considered a limitation to the study, since if inquiry of trust and relationship issued would have been a principal theme of the interview much more straightforward information could have been obtained. Finally, as the study case area is very local, it might be difficult to generalize the results of this study to the whole of Sweden or even to Southern Sweden, however the study is a step forward into comprehending trust relationships and the issues found could be generalized by further studies.

## 5. Results

### ***5.1 SFA: personal qualities transform in a trustworthy relationship***

NIPF owners, and many other stakeholders, in Hallaryd consider SFA a trustworthy and reliable actor. There is a very positive personal relationship between the state institution and most of interviewees (see Table 4). Relationships are most of times of the personal type. NIPF owners have known SFA staff for a long time, and repeated contact has led to closeness and bonding. Personal contact is especially evident with a singular Forest Officer, (*Forest Officer A* for matters of anonymity) who is mentioned in many occasions by different NIPF owners detailing his personal and professional qualities.

Guidance and balance are important characteristics for NIPF owners. Guidance includes teaching and future directions to forest management and their holding. Balance between nature conservation and timber production, is an issue not only stated in the Swedish Forest Law, but also present in the multi-objective ideals of NIPF owners.

*Forest Officer A* is considered to have holistic views thus not only forest management for timber is central but also other possible indirect consequences of nature values, recreational values and aesthetics. Interest in discussing is fundamental as people feel acknowledged, their voices are heard, reaching acceptance of NIPF owners' values. Personal values are significant to owners: the rulebook is not upheld as key but management is personalized, based on the priorities of each owner.

Forest planning and management by SFA, through *Forest Officer A*, has the quality (and the duty) of impartiality. Being a neutral partner means that the forest management plan will not benefit a special actor.

Good knowledge, high capability and skillfulness are considered vital for trust in an institution. If the officers are not believed to be professional but rather reflect incompetent, inefficient or lacking knowledge trust would be eroded.

Having initiative can help to motivate an owner to take action, get involved in management, operations and decision making. It also serves to trigger new ways of doing forestry, e.g. considering applying certification schemes and biodiversity conservation strategies.

Time is a recurrent issue of discussion with many stakeholders, especially lack of it for activities in the forest. Therefore sharing a long time in the forest with the owners is considered essential and very positive in the local social setting. Developing a personal relationship between officers and NIPF owners might be easier if discussions take place in the forest where the management will be practiced, as explanations might be clearer and easier to understand.

Other qualities of the observed positive relationship between NIPF owners and SFA can be considered to depend on the institutional settings, bureaucratic developments and managerial decisions. Keeping local extension office is a key feature to the success of SFA in the area. The presence of local offices makes the contact closer and accessible to NIPF owners, who do not have the need to travel long distances for advice. The staff can also approach owners more easily than if they had to travel to several different areas. Local extension offices are in that sense time saving and

economical to forest officers due to shorter travels. Besides having a local office, stability in personnel is well appreciated by the interviewees. To have the same people at the same place enhances: their local knowledge including ecological features of the landscape; building of social networks and knowledge of the different actors; and knowledge of the economic dynamics. Moreover, the decision of prioritizing contact with NIPF owners is a major cause of positive perceptions towards SFA. Consequently, the final result is a proficiency in SFA's outreaching.

Table 4. Quotes referent to SFA and SFA staff.

Quote	Relevant aspect
<i>"Forest Officer A from SFA [wrote the plan in] 2010. He guides the balance between conservation and production"</i> FO 111	-Guidance and balance.
<i>"Forest Officer A from SFA is perfect; he knows very well [that] Sweden is dependent on forest income. [therefore] you should grow forest on good sites. He accepts what forest owners want"</i> FO 110	-Acceptance of values. -Good knowledge.
<i>"SFA is the best adviser, a prime example of counseling. Especially Forest Officer A is extremely interested in discussing."</i> FO 104	-Interest in discussing.
<i>"SFA is a good player, but it feels like they live their lives a little on balance, they are good at reaching the forest owners but not the public."</i> FO 113	-Outreaching
<i>"Forest Officer A thinks both about environment and nature. The guys are very impressed and think he's great. He checks also if nature conservation is planned wrong and so on. It is often the planning that has shortcomings, since you are not [spending enough time] in the forest."</i> S 210	-Holistic views. -High capability and skillful. -Time.
<i>"I got the [management] plan a long time ago. It influences management very little, but it certainly does. I discussed [the plan] with the forest planner in the woods all day. Forest Officer A from SFA did it."</i> FO 107	-Time in the forest.
<i>"NS [Nature conservation with management] stands will possibly come; it's the initiative of Forest Officer A from SFA. SFA has always made the management plans despite we are members in SÖDRA. SFA is impartial. SÖDRA would make it [the plan] more to their advantage. I'm very grateful for SFA being a neutral party."</i> FO 108	-Initiative. -Impartiality.
<i>"The most impartial is SFA, or should be. The others are driven by economic or industrial needs, or their operative goals."</i> S 208	-Impartiality.
<i>"Sprucetown<sup>†</sup> office is rather unique, with many visitors. Why? There are several factors. First, the right person, and that it has been working there a very long time [Forest officer A has been most influential since the 1970s], then the way of working, our priority is the contact with forest owners, and then they are based on the plans, even though if managed by others (...) They work a lot landowner-oriented and problem-solving oriented, instead of having specific requirements."</i> S 219	-The Right person. -Stability in personnel. -Priority contact.
<i>"In comparison, all [staff] at Pinetown are new. Half the staff has changed in a few years. We don't have a general recipe; either specific strategies. I'm happy as long as I can keep the local extension. We have to think also, when we recruit, that it is most important, that newcomers stay long, not to take the wisest new professional, who's going to soon disappear."</i> S219	-Keeping local extension. -Stability in personnel.

<sup>†</sup> Sprucetown, Pinetown and Pulpmill city (further down) are fictitious names used for anonymity purposes.

## **5.2 SÖDRA: someone to trust (during calamities and for the small forester)**

The study area has suffered damage from winter storms. In 2005 storm Gudrun affected many parts of Götaland. As a result, recognition of storm risks has increased (Ingermarson *et al.*, 2007). Additionally, storms are a recurrent subject of conversation because much of the landscape is planted with Norway spruce, regarded by the owners as vulnerable to windblows. Storm Gudrun is fresh in the memory of many respondents, as are responsive actions taken by the different stakeholders in reaction to the great losses for forestry. Hence, storm risks are a significant issue influencing relationships between NIPF owners and institutions. The following extract is representative of the harsh economic effects of the storm Gudrun:

*“SÖDRA behaved in an exemplary fashion in connection with the storms! The others stole. I had a hard time digesting that forest worth SEK 1.3 million was barely worth 300 000 SEK overnight. We were not members then and we are not members today (...) During the storm it would have been good being a SÖDRA member.”* FO 111

SÖDRA is viewed as a model of ethical behavior. Even though FO 111 is not a member of the cooperative, he feels entitled to give his opinion about SÖDRA's behavior. SÖDRA "protected" owners' vulnerabilities and did not take economic advantage of the situation. FO 111's feelings of freedom are more important than the security of being a SÖDRA member. However, he recognizes the benefits of being a member, especially in the case of damage caused by storms, thus he seems to trust the association.

It is estimated that circa 70 million m<sup>3</sup> of timber were affected by Gudrun (Skogsstyrelsen, 2006). This episode was considered an emergency for the forest sector. In addition, if different stakeholders did not step in on time, the already immense losses would have become even larger. Even though special actions were taken, the great amount of fallen timber made harvesting operations lengthy. In the following quote SÖDRA's fair behavior is again appreciated.

*“It [SÖDRA] behaved so well during Gudrun [the storm in 2005], as it [SÖDRA] went in and said that everyone [the owners] would have the same opportunities to get the wood taken care of. One price regardless of when they [SÖDRAs people] came and took it. That's why you should be a member [of SÖDRA].”* FO 104

From the perspective of FO 104 Gudrun storm, proved the fairness of SÖDRA with its members in times of natural catastrophe. The fact of giving the same price to everybody is a strong message of fairness to the members of SÖDRA: vulnerable owners are given the same opportunities. Thus, the reason for being a member is linked with the fairness and protection that SÖDRA offers to the small forest owner.

NIPF owners' economic vulnerability is mentioned several times in interviews. Forest management can be very expensive in the context of small areas and in need of machinery, for first thinnings and precommercial thinning. The annual profit sharing of SÖDRA to its member is usually mentioned as a beneficial reason to be part of the cooperative. Good prices for timber are also mentioned regularly. Nevertheless, membership is essential if you have small amount of forest, and share cooperative and union values:

*“I’m a member of the cooperative [SÖDRA] because I have so little forest. If I had more, I would not have to [be a member]. If you are a big forest owner you don’t need to be [a member]. Ordinary people need to be in unions and cooperatives. [You need to see] how to do the best economical management.” FO 108*

### **5.3 SÖDRA: an industrial actor**

SÖDRA is generally considered to be more an industrial actor than a forest owner association; meaning that SÖDRA’s priorities are geared towards the industry and not the owners’. This vision is represented by many interviewed forest owners, managers and stakeholders. The industrial features of SÖDRA include e.g. having a centralized organization; being powerful; lacking stability in personnel; outsourcing; prioritizing time efficiency over counseling; having an interest mainly for bulk production. Following are some empirical representation of these issues.

Forest management operations in Southern Sweden are being carried out mainly by the entrepreneurs. Entrepreneurs are becoming more important as large organizations are hiring third parties to carry out operations. SÖDRA is in this aspect no different from many other companies:

*“We are members of SÖDRA, it lives on. (...) and we are called to meetings. SÖDRA is working with others and hires others to get contractors. Dual certification is handled by a contractor.” FO 105*

The views from a member on SÖDRA’s outsourcing tell us how the company’s working settings are functioning. Outsourcing is very common in the forest sector: to have different small companies doing silvicultural operations and seasonal workers from other countries is usual in southern Swedish forestry. However, outsourcing gives NIPF owners the sensation that the association is not “on the ground” with them as it could be. FO 105 insists that the contractor operating is not recruited by SÖDRA but by another third party. Here, a direct relationship member-association is replaced by a relationship chain member-entrepreneur1-entrepreneur2-association. This issue can give NIPF owners the sensation of being far away from SÖDRA.

SÖDRA’s perceived distance to the NIPF owners can be due not only by the views on outsourcing but also by the perceived centralized structure of the association. Another cause of failure in relationships can be the misfortune of getting “bad inspectors”. Consequently, the centralization of SÖDRA and the ineffectiveness of the inspector results in a longer response time.

*“We are members of SÖDRA, but we deliver nothing. It [SÖDRA] has bad inspectors. It was too cumbersome, so centrally conducted. We only had thinnings [to carry out], he [an inspector] thought we had a lot of timber. I asked [to sell] about 1000 m3 of pulpwood, but I got no response for a long time. He replied that we [then] needed 400 m3 of timber logs on top. But I don’t do any final fellings. The industry cannot control my management! But it does not matter, because we [still] get dividends [from SÖDRA].” FO 109*

FO 109 relationship with SÖDRA gives many different indications of the dual nature of membership. As members are not obligated to only sell timber to the association; but it is ideally what they should do. However, local contexts are far more complex, producing different behaviors in NIPF owners. FO 109 continues to be a member of SÖDRA, regardless of having a deteriorated relationship with

SÖDRA due to a “bad inspector”. FO 109 underlines rational economic benefits for keeping membership: getting the dividends resulting from SÖDRA’s industrial branch. On the other hand, the same “Industry” (as FO 109 perceives SÖDRA as the Industry) providing annual profits, also aspires to be a controlling entity of FO 109’s management.

Having a bad inspector is not the general case for the respondents in Hallaryd. Many think entrepreneurs (e.g. inspectors, buyers and contractors) are well experienced, skilled and capable of doing their jobs with good intentions that will also benefit the NIPF owners. Nevertheless, other factors influence negatively the interactions.

*“Many inspectors, buyers have a personal character and relationship with the suppliers or owners, or members as SÖDRA calls them. (...) There are inspectors in SÖDRA that give management for free; they manage members' forests as if they were their own. There are also buyers in SYDVED [who act in that way]. But they get into conflict when their bosses insist: ‘Now, be sure to bring in pulpwood! It's crap prices now, don't waste your time running on all regeneration [stand], but you should buy wood!’. Silviculture is hanging somewhere there in between, SÖDRA, SYDVED, everyone says they are happy to help with that, but it is not their main occupation.” FO 113*

From the extract the dedication from inspectors to their clients is evident. Treating the holdings as their own reflects the importance inspectors give to an active forest management based on the objectives and values of NIPF owners. As counseling is free it serves as an example to manifest the inspector good will. Unfortunately, such situation is not always prevalent, but it is associated with lack of problems and a well-functioning timber markets. But in reality timber prices are constantly changing, influenced by the global circumstances in the finance, economics, monetary and timber markets. Such aspects are recounted by FO 113. A shift towards economic uncertainty and vulnerability due to market dynamics; is a signal that it is time for the inspectors to act ‘now’. Therefore they have to focus on timer buying, leaving at a side their advising duties. In other words, forest counseling and managing client’s forests, namely looking at regeneration stands, becomes a waste of time. FO 113 considers that forest management is neglected due to fluctuating prices and the need of the industry for bulk production, since the main role of the inspectors is indeed to work for the industry and buy timber. Bulk production is very important to the Swedish Forest Industry. FO 108 discusses that the industry needs to be well functioning first and that owners’ objectives are not primary. Swedish forests are there to be harvested for industrial profits. As a result, there is an extractive approach to the pulpwood.

*“When SÖDRA or SYDVED come, they make sure of their own interests. I've often taken up with SÖDRA that they don't care about the forest owners' best, they care about the industry. Results are made in the industry. They cut down more pulpwood than what they should and less logs.” FO 108*

Some forest owners can feel disempowered, as if they cannot influence the large forest owner association. The expansion of SÖDRA is seen as a negative factor influencing the relationship with FO 104. There is no stability in the contact he has over time, which makes more difficult the creation of lasting reciprocal relations. Changes in personnel are also negatively perceived by NIPF owners.

Interest to part take in meetings, to listen and learn is however an effective sign of will to participate. However, FO 104 still has a low trust to the leaders of SÖDRA and he stresses communication issues between SÖDRA and NIPF owners.

*"It's good that there are member associations as SÖDRA (...) I don't think I can make an influence. It [SÖDRA] has become too big of an organization. I've had 5 different contacts in the space of 10 years. Reorganization and change, so there is no stability (...) and it [SÖDRA] has become a little too crowded for talented people there (...) I go to meetings and listen and learn. I have no major trust in the board of trustees; they have no contact with the owners [and] don't know who they [the owners] are." FO 104*

#### **5.4 Trust in inspectors and entrepreneurs**

On the contrary, it can be said that SÖDRA through its inspector, as well as other timber buyers have built robust trust relationships with some owners. One stakeholder, in order to describe how a forest owner thinks, makes an analogy between the high degree of trust owners give to companies and entrepreneurs:

*"It is the buyers from the forest companies who are skilled, [because] they have built up trust, so forest owners rely on these people and [as the forest owners would think or would say] 'you know to do that very well', 'you know how it should be'. But [to] just let people [in] fully in the forest. But if you would be at home and retile your bathroom, then you would want to influence the color and whether it should be warm gold, when you are inside your house you just don't let people go anywhere, so [then] you can refuse to pay." S 220.*

The forest is in this case your home, and doing silvicultural operations is like renovating your bathroom. The attachment a person has to its home is considerable: your home is your shelter, the safest place you can be at and the place which you have the most control on. Nobody can decide over the tile color of your own bathroom. It is a decision for the future, since it will influence the way your home looks for many years to come, which can turn for example in an earlier than expected need for renovation if the durability and quality is low, or the color was not the one you liked. Silvicultural operations are, as for bathroom tile color, a decision for the future. The way the forest will look like and the products that can be obtained from it are decided many years in advance, e.g. planting methods and species decision must be linked to several aspects of site conditions, in which local knowledge is highly valuable and NIPF owners are central. A wrong decision in an early stage can represent present extra costs and the failure of the plantation; or losses of potential growth in the future. However, the trust in entrepreneurs is still present, the same stakeholder continues:

*"But in the forest, you let others decide for you, because you have so much trust that someone else knows best. But I who own it [the forest] and have 5 million [Swedish crowns] invested in my property, I do not care about the money because someone else [the entrepreneurs] takes care of it for me, [because] they [the entrepreneurs] know how to do it. I do not understand this. You cannot just leave this [the decision making of your forest property to the entrepreneurs], because to be active and manage your forests is the best thing there is." S 220.*

The forest is an important place, as your home, and is left in the hands of the entrepreneurs to manage. Such belief shows undoubtedly the evidence of trust of the NIPF owners towards entrepreneurs. Results seem to point at three possible explanations of such behavior:

1. High degree of trust and well informed forest owners. NIPF owners are aware of the consequences of present operations on the future state of their forest. They completely rely on the competence of the entrepreneurs to deliver the forest they want.
2. Medium degree of trust and bad informed forest owners. There is trust in the entrepreneur but the forest owners are not completely informed on what the consequences of letting them decide might be, and that the resulting forest could be different from what they expect.
3. Low degree of trust and a lack of interest. Trust is still present, NIPF owners employ entrepreneurs to take care of the forest but for different reasons they are not very interested in the future state of the forest.

### ***5.5 Further issues influencing relationships between forest owners and stakeholders***

**Centralization** of state institutions and problems arising from bureaucracy are seen as threats to the wellbeing of relationships in the local setting. S 202 explains clearly what he thinks would happen if local extension offices would be closed and the service centralized:

*"I think if it [SFA] becomes more centralized relationship will get worse. If all were to move to Pulpmill city for example. The more controlled of bureaucracy, the more difficult to achieve the results. The best relationship arises in the personal meeting. Most people don't read. The personal meeting is needed to achieve the results. You must have people with you, so they can view and point at, then they can learn." S 202*

A strong argument against centralization as a limitation for good relationships is the need of face to face meeting. Personal contact is perceived as the best way to achieve a good interaction. Centralization would make meeting in person more seldom thus decreasing the possibilities for discussions, building confidence, sharing experiences, giving advice, and learning in the field.

**Time and office work** is reflected in that stakeholders experience a shift in their work set up. More office work and lack of time to be out in the forest is a concern for many.

*"It was a lot of changes in recent years. In everyday life, it is now very difficult to get time at being out in the woods and meet forest owners. You can't keep up with it. You have less time for that. You have more office work, much more." S220*

As aforementioned, **costs and market prices** influence the amount of time spent out in the forests. The following quote shows how lack of time influences the whole forest buying chain: resulting in the mismanagement of forest and the disregard of other forest values than timber.

*"You fool yourself when you squeeze costs. Buyers have to buy more and take in more cubic meters per person employed, they don't have time to go into the woods and plan, and then this presses the felling costs of contractors, then they don't have time to leave the machines, and then there will be no one [going into forest]."*

*Someone in the chain has to leave the machine and really go and look what's in the trees that we harvest (...) that's where the shortcomings [come from].” S 220*

Time spent out in the forest is considered by the same stakeholder as key for successful **forest management counseling**. Being outside augments the possibilities of the owners to grasp better the forest managers' advices, since they learn by doing and observing in the field. On the other hand, more abstract teaching (i.e. ppt. slide) is not as successful in the learning process of forest owners.

*“The buyers don't have time. Without being out in the forest, it is difficult, without meeting the person who owns or manages the forest; it's difficult to influence the state of the forest. One can meet the owner at his home, but being out in nature is required to succeed, for the owner to decide, to change the owner's behavior. It [Counseling] doesn't work watching at a power point. Being outside influences counseling. We have activities with precommercial thinnings, one day activities where they understand, inside the forest and you can teach them. Outdoor education is fantastic, when you are really in nature, and use nature as a textbook. That's when you can experience that you can get an effect.” S 220*

**Issues in communication and misunderstandings** can bring problems for forest management and relationships as owners do not feel listened. This problem is quite evident in the following quote where a specific, and uncommon, measurement was required from a NIPF owner, but instead the contractor just did business as usual.

*“I wanted to save the beautiful crooked oaks, and remove all spruce, so I arranged it with SÖDRA. Then I come and see the contractor removing the oaks, and asked what he was doing, ‘But it's so beautiful spruce’ [the contractor said]. Then I realized that he was given very vague instructions. Then I said ‘if another oak is cut you can leave my property immediately.” S 209*

Time in relation to **Information Technologies** is also believed to influence the way of working with forestry. S 210 perceives IT technologies as time saving but anti-social. Since S 210 experiences that time is not enough for visiting all harvesting operations, by delegating duties he gives trust to employees and other parties. Additionally, a reduced number of personal meetings affect negatively old forest owners.

*“There is a lot of IT in our world, GIS and so on. It has become anti-social, but it's time saving. You never have time to see some harvesting, so I trust my guys. You can't have someone you don't trust. It has to do with how good you transfer information to the next party. You must be able to trust and delegate (...) Involving them and they'll call the landowner, much feedback. As follow up, they should submit forms, etc. It's smooth, unfortunately worse for the old [forest owners]” S 210*

New NIPF owners' main income comes from other sectors than forestry or agriculture, so their priorities might not be to spend so much time with forest planners in the field. Therefore new landowners seem to need different ways of communication.

*“(...)it is the new landowners now who don’t have time to spend the whole day for each person. Some [forest owners] are excited and others more terrified. It becomes more impersonal, not the same personal meetings. A harvest of 250 cubic takes a day.” S211*

In conclusion, the most significant features found in the field were: i) strong and trustful relationship between NIPF owners and SFA; ii) trustworthy behavior of SÖDRA during hard times; iii) SÖDRA represents the industry and not NIPF owners’ best interests; iv) entrepreneurs can be trustworthy actors; and v) centralization of institutions, lack of time of officers and communications barriers influence the relationships between NIPF owners and other stakeholders.

## 6. Discussion

### **6.1 Trusting organizations, personnel or both**

SFA success in creating trustworthy relationships is the key result of this study. SFA performs accordingly to the trust aspects defined by Nooteboom and Six (2003). Respondents perceived a great degree of competence in SFA's communications, knowledge and management abilities. SFA does not behave opportunistically and its intentions are characterized by dedication and goodwill. The aspect of honesty is somehow more difficult to discuss, since it is embedded in the perceptions of lacking opportunism (Nooteboom and Six, 2003).

The small scale of the landscape laboratory, proved its value to disclose personal contact between the owners and several stakeholders. *Forest officer A* had close contact with many respondents; he had been working in the area for a long time, creating personal relationships and building trust that can be passed through generations (Hujala and Tikkanen, 2008). The explicit trust towards *Forest Officer A*, raises the question about the degree of importance of the single person versus the adopted strategies of the SFA. It was found that frequent contact created a "web of trust, where it is hard to differentiate between a person and the system/organization" (Schlüter and Koch, 2009: 390). Furthermore, in order to transfer trust from organization to individuals and vice versa there is a need for trustworthy individuals that are backed up by the system (Nooteboom and Six, 2003). SFA local office serving Hallaryd presents these conditions: the local office's anchoring; long permanence of personnel (enhancing local knowledge and facilitating contact); a client based approach; and personal qualities of SFA local forest officer.

### **6.2 [Mis]trusting [un]shared values or [lack of] personal contact**

Forest owners consider several benefits from their ownership as important: recreational activities and outdoor life, hunting, fishing, picking berries and mushrooms, having access to and collecting firewood, and carrying on with family and/or forestry traditions (Hugosson and Ingemarson, 2004; Berlin *et al.*, 2006; Kindstrand *et al.*, 2008). Balancing the variety of objectives and interests that NIPF owners have with the forest industry's need for raw material is a difficult task. Therefore conflict of interests might be present as forest consultants act for organizations linked to the large industries, thus encouraging forest management more convenient to industrial needs, and avoiding beneficial options to NIPF owners (Felton *et al.*, 2010). Mismatched values and interest between NIPF owners and consultants (Kindstrand *et al.*, 2008) could bring problems in the future, as the loss of trust, will result in difficulties to get memberships and timber for its industries (Berlin *et al.*, 2006).

Yet, if the association functions for the industry - whose ideal is financial return and the intake of as much timber as possible- then it can be argued that SÖDRA's values are becoming those of the industry. A consequence of this process is that SÖDRA drifts away from its primary mission: to work for the good of the NIPF owners, while adjusting to the members' interests and values. The reasons for this hypothetical change in values are not clear. One reason can be that forest resources are seen from a business perspective, meaning that other values are not sufficiently taken in consideration. In such case, profits would be prioritized on top of other cooperative essentials (e.g. participation, concern for others, fairness).

It is clear that SÖDRA is organized to make profits and is successful in doing so; thus to request for a cooperative enterprise model would be a contradiction. Such inconsistency is explained by Nilsson and Björklund (2003) as a flaw of applying general economic theories to cooperatives in different market conditions. Accordingly, SÖDRA is considered an entrepreneurial cooperative, since it receives capital contributions from nonmembers and is supported by the industrial branch of the organization; a commercial oriented model that gives access to plenteous economic capital and is “well suited for operating at markets further down the value chain” (Nilsson and Björklund, 2003:12). Hence, while SÖDRA is successful in the highly globalized and dynamic market of timber and pulp; others practical aspects (e.g. time expenditure and local anchorage) should be taken into consideration for trust building.

The amount of time shared by forest officers was one of the most important factors limiting their relationships. Deficiencies in time create communicative distortions causing tension between service and customer’s needs and incomprehension (Hujala and Tikkanen, 2008). Such is the case when forest planners avoid clarifying owners’ objectives due to “time pressure and/or the owners’ inability to express” them (Brukas and Sallnäs, 2012:609). Finally, as “repeated interaction with people, to whom all sorts of questions can be asked, is crucial” (Schlüter and Koch, 2009: 390), finding the much needed time will help building personal and organizational trust. Stability in personnel working locally can create the appropriate environment for bonding. Adaptive measures, as the use of local agents, are worthy alternatives in order to access forest owner and gain trust, (Schlüter and Koch, 2009).

On the other hand, SÖDRA’s communication strategies could be deemed cutting edge. Considering demographics of rural Sweden and new relations to the forest of the coming generations, a scenario of mostly urban forest owners grown up in the IT era would call for a different type of communication approaches. Since rural and urban owners “utilize trust for different purposes” (Hujala and Tikkanen, 2008:474), new type of NIPF owners will have different set of values, interest and objectives. As a result, trust building might depend more in experiences of positive outcomes than on frequent and time-consuming face to face interaction. Accordingly, future owners might prefer using IT communications (e.g. mobile and tablet applications, email and social networks feedback) over personal meetings and long walks through the forest. In such scenario, the present critique can be considered backward thinking, instead of modern. Nevertheless, while dealing with uncertainty, using both communication approaches with owners and *not putting all the eggs in one basket* would be safer. In SÖDRA’s case, having contextualized member communication (i.e. applying new and old types of communication in dependence to the owner type) could be a promising strategy for building the much needed trust.

### **6.3 Trust and calamities**

The relationship between trust and the incident of storm Gudrun is found in a handful of studies. Ingemarson *et al.* (2007) find that stakeholders behaved properly after the storm, especially SFA and forest owners associations. Furthermore, NIPF owners’ trust in forest owners associations increased the most compared with all other stakeholders. Even though, the severity of the storm Gudrun was a challenge to most people involved in forestry, management and working of all the fallen timber functioned much better than anticipated (Svensson *et al.*, 2011). Observed reasons for a successful

work were: active participation of NIPF owners in information exchange and contact networks with authorities; the assumption of responsibility from forest officers brought great appreciation from the FOs (Svensson *et al.*, 2011). In a qualitative study about the experience and reactions of NIPF owners from the storm Gudrun, Klasson (2005) interviewed 10 characteristic NIPF owners and focused on the different phases of a crisis sequence. It emerged that a relative positive opinion about public institutions, banks, insurance forest companies and entrepreneurs. In addition, it was noticed that stressful moments after the storm also caused anger between NIPF owners and actors, as entrepreneurs or forest companies (Klasson, 2005).

SÖDRA understands that egalitarianism represents powerful means of achieving a positive corporative image that garners trust. Its website reads as follows: "*SÖDRA quickly established principles of equal payments. Secured the support from the community, reinforced heavily the organization's resources, timber terminals were established and the own industry was used at maximum capacity for the storm felled timber. Member could feel safe*" (SÖDRA, 2013f; own translation).

Considering that Southern Sweden is quite dominated by Norway spruce monocultures, more susceptible to winter storms (Schlyter *et al.*, 2006), and forest damages in southern Sweden have increased in the last century and especially in Kronobergs County in the past decade (Nilsson, 2008); the behavior of institutions after calamities will improve or erode relationships. Bearing in mind that egalitarianism enhances trust (Uslaner, 2002) SÖDRA's experience must be followed when future calamities occur, in order to maintain social capital within the forest sector.

#### **6.4 Social methods in forest research and by foresters**

The use of qualitative research is not widely spread in forest science; consistently forestry students do not have broad training in the theoretical and practical aspects of qualitative studies. Still, the methods chosen proved worthy to fulfill the study aims and answer the research questions. Grounded theory functioned soundly in line with what Charmaz (2008) claimed that defining a narrow research question only after getting familiarized with the social and relationship context of Hallaryd. A posteriori building of a theoretical framework allowed for a detailed explanation of the data gathered. Nevertheless, several issues of the study can be discussed.

The small scale of Hallaryd's 'landscape laboratory', although clue for the study, was also a limitation. Networks were very close and a small amount of stakeholders working within forestry made it impossible to present some of the information given by the participants, since particular views of individuals, especially stakeholders, could be recognized. Hence, the research team would be breaching the pledge of anonymity.

Even though the study area was chosen to serve as a typical case study of Southern Sweden, based on previous experience from scientific experts and a discussion with forest owners, the result from the study might not represent social context in other areas. SFA local office is particularly successful in conserving the local anchorage, perhaps even a role model; nonetheless this does not necessarily represent the general picture of the relationships of SFA in Sweden.

Although the general results presented are quite recurrent in the interviews, the questions posed to participants were not directed to answer the research questions of this study. This opens the assumption that answers could have been different with more direct questions.

## 7. Conclusions

This thesis was a case study on the relationships of trust between NIPF owners and other stakeholders in southern Sweden. The study was based on semi-structured interviews carried out within the EU funded research project INTEGRAL. The analysis of the empirical material through grounded theory brought to light the differences in trust among forest owners and two important stakeholders.

NIPF owners hold strong and outstanding relationships of trust with SFA, which is most likely due to the local office's anchoring. SFA working setting has created a web of trust (Schlüter and Koch, 2009) where personal and organizational trust is mingled. SFA fulfills theoretical aspects of trust, i.e. competence, intentions and honesty (Nootboom and Six, 2003), which are represented in its practice by: long permanence of personnel, enhancing local knowledge and facilitating contact; a client based approach; and the personal qualities of SFA local forest officer.

SÖDRA is viewed as a fair actor in the aftermath of calamities. Calamities can indirectly increase trust among actors through interaction, cooperation, egalitarian and protecting measures taken by powerful actors. On the other hand, SÖDRA prioritizes industrial objectives over those of NIPF owners. The reasons are complex, yet outsourcing, the perception that SÖDRA had changed its values, and pressures from competitive timber markets are noticeably making NIPF owners -SÖDRA relationship drift apart. As SÖDRA's has grown from a small into a large entrepreneurial cooperative, with operational and industrial characteristic, SÖDRA is faced with communication issues, as this evolution takes place, the family and small community values start fading away, thus the association becomes an external actor distant and partly opposed to the interest of forest owners.

Further understanding, recognition and building of long term and fruitful relationships NIPF owners – other stakeholders can be achieved through several measures in working methods: a focus on NIPF owners' objectives, avoidance of changes in personnel, increased time in field consultancy and customer based selection of communication means.

NIPF owners possess a broad set of objectives and values which are included in most guidelines and discourses of the forest managers from timber companies and SÖDRA. These objectives however are not mirrored into practice, as NIPF owners feel their objectives are not really taken in consideration. Empirically, the successful case of SFA in Hallaryd shows a model that can be followed by other stakeholders, or by other SFA districts.

Enhanced understanding of the relationships with owners, can result in SÖDRA applying measures as improving the local contacts with forest owners, reduce the changes in personnel, and developing personal approaches of communications. The influence of the timber market dynamics is remarkable also in the local context; these factors stress the industrial need for bulk production or decrease timber prices. However, little can be done to influence the markets, therefore adaptive measures in the working methods and relationships to the NIPF owners must be considered. On other hand, reaching an understanding of the market situations by the NIPF owners could improve empathy towards officers in times of stress.

The abundant empirical material gathered by INTEGRAL was partly used to expose the relationships between forest owners and two stakeholder organizations. Additional master students could use the material to untangle further aspects of small scale forest ownership of the 'landscape laboratory'. For instance, entrepreneurs' importance is mentioned several times during the study. They play several roles in forest operations and usually represent the link between companies and NIPF owners. Therefore, including entrepreneurs within the stakeholders group for future research is recommended.

The usage of mix methods (i.e. qualitative and quantitative methods) for approaching such subjects can be of great importance (Hennink *et al.*, 2011) to inference the generalization into larger scales (e.g. Kronobergs county) of the insightful results presented here. Consequently, I suggest the use of mail questioners or online surveys to approach a larger number of NIPF owners, thus bringing further validation and generalization aiming at a greater impact in policy and practice.

The study of social capital as a factor influencing Swedish forestry should be carried out in a multidisciplinary sense in order to have a bigger picture of the potentials that developing such capital has to the sector. Other methodologies for the study of social capital (e.g. Smith, 2012 or Paletto *et al.*, 2012) can be adapted to the local contexts of the Swedish forestry.

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