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Actor Interaction in the EIA Process in Sweden: Case study of Tönsen Wind Power Park Project

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Abstract

In the growing concern for the state of the environment more tools are being integrated in the decision-making processes. Sweden actively makes use of environmental impact assessment (EIA), which is supposed to minimise negative impacts of a project, policy or plans on the environment. The EIA process in Sweden still requires certain improvements to be more efficient. In this study actor interaction was analysed with trust being the framework for analysis. The aim is to find out whether it is possible to use trust as a framework for analysis since trust research is very discipline dependent. For this analysis impersonal trust between organizations as interaction was mostly used. The chosen framework was applied to a case study of the wind power project in Tönsen. Methods for the study include a literature review and surveys. The results include suggestions on how to better design a detailed framework for analysis.

It was found that there is a need for more cross-disciplinary or interdisciplinary view of trust and further development of certain aspects of the theory such as quantification, dynamics, reciprocity, and classification. Actor interaction in the EIA process proved to be an interesting, but challenging task since it involves many interactions of different nature. In practice the biggest challenge is in the interaction between developer and the general public. It is argued that with further research in applying trust to actor interaction in the EIA process, the process can be improved and relationships between certain actors can become better.

Sammanfattning

Det finns en växande oro för miljöfrågor i många länder nuförtiden, därför integreras olika verktyg i beslutsfattandet. Sverige använder miljökonsekvensbeskrivning (MKB) som ska minska negativa miljöeffekter i samband med genomförande av projekt, policy eller plan. MKB-processen behöver förändras för att bli mer effektiv. Syftet med denna studie har varit att se på om man kan analysera interaktionen mellan aktörerna inom MKB-processen genom teori om förtroende. I analysen användes främst opersonligt förtroende mellan organisationer inom interaktion. Analysramen tillämpades på en fallstudie av vindkraft verksamheten i Tönsen. Studien bygger på litteraturstudier och enkätresultat.

Studien föreslår hur analysramen kan förbättras. Den visar att det behövs en mer interdisciplinär eller tvärvetenskaplig uppfattning av förtroendet. Några teoretiska aspekter, bl. a. kvantifiering, dynamik, ömsesidighet och klassificering kräver ytterligare utveckling. Interaktion mellan aktörerna inom MKB-processen visade sig vara intressant, men utmanande för analysen eftersom samverkan mellan aktörerna var av olika karaktär. I praktiken visar samverkan mellan verksamhetsutövare och allmänhet vara det mest problematiska. En slutsats av studien är att fördjupade studier inom området kan förbättra MKB-processen och samverkan mellan vissa av aktörerna.

Summary in Russian

Вопросы окружающей среды приобретают все большее внимание со стороны правительств многих стран мира, в свете чего различные инструменты, призванные способствовать охране окружающей среды, интегрируются в местные законодательства. В Швеции широкое распространение приобрела оценка воздействия на окружающую среду (ОВОС), призванная минимизировать негативные последствия для окружающей среды, вызванные хозяйственной деятельностью. В данной работе проводится анализ взаимодействия участников процесса при помощи теории доверия на примере проекта ветряной фермы Тёнсен (Tönsen). Задача данного исследования выяснить, применима ли теория доверия, точка зрения на которую сильно зависит от дисциплины ее изучающей, к данной ситуации. Для данной ситуации использовалось безличное доверие между организациями. Результаты предлагают рекомендации по дальнейшему исследованию в области доверия с целью улучшения анализа ситуций.

Результаты показали, что необходим более междисциплинарный подход к доверию и дальнейшее равзвитие определенных аспектов, таких как, например, взаимность, классификация, квантификация и динамика. Процесс ОВОС включает в себя взаимодействия большого количества участников, а потому является сложным для анализа. С практической точки зрения наибольшие проблемы, в том числе, связанные с доверием, встречаются в отношениях заказчика и общественности. Разумно предположить, что при более глубоком анализе доверия в процессе ОВОС процес возможно улучшить, так же как улучшить взаимоотношения между участниками.

Abbreviations

CAB – County Administrative Board
CBT – Calculation/calculus-based Trust
EPBC – Environment and Planning and Building Committee (within Municipality)
EIA – Environmental Impact Assessment
EIS – Environmental Impact Statement
EPO – Environmental Permit Office within Gävleborg CAB
IAIA – International Association for Impact Assessment
IBT – Identification-based Trust
IT - Information Technology
NEPA – National Environment Protection Act
NGO – Non-governmental Organization
UN FCCC – United Nations Framework Convention on Climate Change
RA – Representative Assembly (within Municipality)
SGU - Geological Survey of Sweden

Table of Contents

Introduction

The world is currently involved in global discussions of natural degradation and the need for long-term thinking in different fields' on the matters of environmental management. The discussions are brought about by our responsibilities to future generations (see definition of "sustainable development" in WCED, 1987). Due to growing concerns some countries have incorporated the concept of sustainable development in their national strategy (e. g. Australia in 1992, Germany in 2002; the UK in 2005, etc. (see UN, 2009). The change in perception of the natural environment from a workshop or an endless source of necessary resources to sensitive environment that needs protection from human activities lead to the development of different policies and tools in order to implement those protection measures.

In 1999 the Swedish parliament adopted 15 environmental quality objectives, with the 16th added in 2005. Along with that, the government adopted sustainable development as an objective of Swedish governmental policy in 2001 (Comm. 2001/02:172). Sustainable development is a rather elusive goal to achieve due to disagreements about its definition, which is why the process of change, not some specific indicators, is viewed as important. Besides, the concept is somewhat controversial taking into account that besides protecting the environment, it also points out that development should not be stopped (e.g. Sachs, 1999, p.34). The Swedish national strategy mentions different means of implementation of the concept, among which are the Environmental Code and Impact Assessments. The Swedish National strategy (Swedish Ministry of Environment, 2001) defines the purpose of impact assessment as follows: to identify and analyse the main problems or conflicts of interest and to supplement and improve the quality of decision guidance data in order to provide a better basis for decision-making. This is a general definition of impact assessments, which can be of different things, either environmental or social or economic impacts. This study is going to deal with the environmental kind, even though, as it will become clear later, it takes into account not only environmental factors.

The International Association for Impact Assessment (IAIA, 2009) defines an environmental impact assessment (EIA) as "the process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made." It is important to point out that this definition covers both projects and programs or policies and this paper will only consider that of projects. In other words, when a developer considers a certain project before carrying it out and applying for necessary permits, he or she must explore potential effects the project will have on the environment, alternatives and mitigation measures. EIA is by no means a tool to stop development for the sake of the environment, quite the opposite; it was designed to promote development that causes minimal harm to the environment while providing all the benefits brought on by the project (Glasson et al., 2005, p.8). According to Sadler and Jacobs (1990) an environmental assessment is widely used to "integrate ecological and social considerations into development planning and control".

It is necessary to be aware of the fact that there are two terms used in regards to the topic of this research, sometimes mutually interchangeable: environmental impact assessment and environmental impact statement (EIS). While the first one is more general term referring both to the concept and the process of the EIA, EIS always refers to a paper statement that is the result of EIA. EIS is a document that provides all the necessary details and precisely this document is a basis for the decision since it should contain a comprehensive summary of all environmental impacts and mitigation measures (Glasson et al., 2005, p.170-171).

EIA is viewed differently by people of different backgrounds. Since it is a complex concept involving numerous aspects for consideration, some people regard it as a separate discipline, while others treat it only as a management tool for decision-making (Glasson et al., 2005, p.8). There are different methodological approaches to look at EIA: whether the content or the process is emphasized (IAIA, 2009). This work is mainly going to focus on the process of EIA, more precisely the interaction between the parties involved in EIA. Limited attention is placed on actor interaction in previous research as it is dependent on the actors involved and thus is different from case to case. The EIA centre within the Swedish University of Agricultural Sciences (SLU) (Hedlund and Johansson, 2008) carried out a research on actors' roles and significance in relation to the quality of EIA in Sweden. However, that research was more of a general character and did not focus specifically on actor interaction. Seeing an existing gap in knowledge related to EIA and opportunities for finding areas for improvement, I decided to undertake this research.

Thesis outline

The paper is organized in the following manner: introduction, aim and objectives, theory, methods, background information, case study, discussion and conclusion. Background information provides both general information about the EIA process (history and Swedish peculiarities) and case-specific general information including the wind power industry and description of roles of the actors involved in the process. The case study presents description of the chosen wind power project and results of the surveys filled out by some of the actors involved in the process.

Aim and objectives of the study

The aim of this study is to find out whether trust theory is applicable to the analysis of actor interaction in the process of EIA. Attempts to classify existing relationships between the parties involved in the EIA process led me to think that each one is of a different nature, thus, making it harder to apply one given theory. By finding a more or less common view of trust between different disciplines and applying them to a given EIA case of a wind power project in Sweden, I shall see if it is a good framework for such analysis. Besides, the conclusion may result in suggestions for further developments both of the theory and the EIA process.
In order to apply theory to the case, peculiarities of the case are to be identified. The following questions (objectives) are to be answered throughout this study:

Who are the actors involved in the EIA process?
How are their roles defined in legislation?
How do they interact?

- In which stage of the process and how closely?
- What are potential risks in connection with interaction and are there any real problems?
- If there are problems, where do they come from?

What is the perceived trust level? / Do actors see each other as trustworthy?

- Is it possible to see if a cooperating party is perceived as competent, benevolent, and full of integrity?

- How predictable is the behaviour of the actors?
- Is there previous experience of interaction prior to this case?
- What kind of trust can emerge in this case?
- Is the information exchange adequate?

The main focus is placed on trustworthiness of actors as perceived by trustors. Development and implementation of any project can involve conflicts of interests and due to practises recommended for EIA, namely consultation with the necessary authorities and the general public, such conflicts should be managed effectively in order to produce a preferred outcome. It is logical to assume that trust can enhance compromise.

Theory

When dealing with interactions between multiple actors, the choice of theory to apply to analysis can be a tough one. Despite there being many actors involved and dynamics between them being different, EIA is also a process that involves many stages. Even though the overall objective of an EIA is for an EIS to be a basis for decision whether a permit can be granted and the project can be implemented or not, decision-making is only up to the authority in power of making decision. The ultimate goal of an EIA is to minimise the negative environmental impacts of the project in question. That is the reason why many actors, including the general public (in Sweden it is mandatory according to the Environmental Code, Ch. 6 §4) are involved in the process, so that they can represent different interest groups and point to consequences of the project that may not be so obvious to developers. Therefore, since interaction between the actors is meant to facilitate cooperation, it is logical to undertake theory that has to do with cooperation. This sort of cooperation is closely connected with operating within uncertainty when the adequate exchange of information is crucial for reaching common goals. Mechanisms contributing to the reduction of uncertainty within an interaction are power and trust (Bachmann, 2003). Power usually presupposes opportunistic behaviour meaning that the vulnerability of a trusting person or institution may be exploited by a trustee (the agent in whom trust is invested) (Lane, 1998), which is not meant by the purpose of EIA, thus for this very reason different aspects of trust concept were chosen.

Before moving on to explain which aspects of trust were employed, it is necessary to note that for the purpose of interaction analysis of actors should be broken down into pairs. As suggested by Hedlund and Johansson (2008) who studied roles and significance of actors in the EIA process, interactions are as follows:

1) Developer – Consultant (EIA team)
2) Developer - Reviewer/Decision-maker
3) Consultant (EIA team) – Consultation parties (including general public and regulating agencies)
4) Developer - Consultation parties (including general public and regulating agencies)
5) Decision-maker/Reviewer - Consultation parties (including general public and regulating agencies)

In practice some of the actors are not directly interacting with each other and only developer or consultant can be a link. However, there is definitely some interaction between two given actors (as in pairs listed above) that can be analysed in more detail. Adapting this classification, it is possible to go on to review the trust concept.

Trust has been an object of study of many different disciplines including psychology, cognitive science, sociology and economics (see Rousseau et al., 1998, for references). There is no unified definition of the concept and different approaches to studying it depend on the discipline. However, one can note common features distinguished by researches, despite their background. A useful study in this respect is presented by Rousseau et al. (1998). They came up with a cross-discipline view of trust identifying aspects shared by different disciplines. A definition provided by them (Rousseau et al., 1998, p.395) is as follows: "Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another." Based on this definition it is possible to identify the necessary components, which will be described in more detail below.

Trust can be viewed both as an independent and dependent variable, as a cause or effect (Rousseau et al., 1998). It can also be seen as an interaction, which will be the focus of this paper. In organizational theory there can be two extremes: short-termed oriented opportunism and complete organizational integration and control, while trust is something in between (Bachmann, 2001). There are necessary conditions for trust or its functional equivalents (distrust or power relations) to emerge.

There have to be two agents: potential **trustor** (the one who trusts) and **trustee** (the one who is trusted), who enter some kind of relationship, which is characterized by **interdependency** (e.g. Sutcliffe, 2006). They both want to reach a common goal and cannot do so without each other, however, there are also risks involved. Usually distribution of power between them is unequal and the one with more power is a trustee. Trustor must assess risks against potential benefits and if he or she comes to a conclusion that the benefits outweigh risks, then the decision to trust can be made. Risks and interdependency between the actors contribute to complexity of the situation and trust is a means to reduce complexity. Bachmann (2001) states that trust is "the central mechanism to allow for an efficient solution of the problem of co-ordinating expectations and interactions" between actors. Trust is also closely connected to lack of opportunism. Both agents must not use the asymmetry of power they possess to their advantage. They should be acting on the sole basis of reaching the common goal and not only pursuing their own interests. Thus, when there is choice between trust and opportunism, (it has to be voluntary), trust cannot be forced upon. Besides, investing in trust means that trustor's expectations of trustee's behaviour are positive, implying that most likely the trustee will behave the way the trustor expects them to behave (Bachmann, 2001).

Usually trust would manifest itself in behaviour; therefore direct measurement of trust would be the study of behaviour. Nonetheless, it can also be measured indirectly through attitudes and perceived levels of trustworthiness (expectations). It should be noted that trust is a dynamic phenomenon, which develops over time (for example, Lewicki & Wiethoff, 2000; Rousseau et al., 1998). Naturally, when it is studied, typically a certain moment is studied, but in reality trust has its stages: it has to be built, then it can come to a stage of stability and it can dissolve in relation to some incident (Kim et al., 2009). Trust that dissolved due to betrayal can be referred to as mistrust (misplaced trust) (Marsh et al., 2005).

Trust also functions on different levels: it can be interpersonal or impersonal. In the case presented, impersonal trust will be studied, which means trust between organizations and organizations will be the interacting agents. Naturally, interpersonal relations affect interactions too and may result in more trustful cooperation. Bachmann (2001) points out that nowadays basing business relationship on interpersonal trust is not wise, since it takes so much time and effort to build.

The not so unified field of interest within research on trust is classification of forms of trust, closely connected with basis for trust. Different types of trust are distinguished based on the approach taken and discipline in concern. The most common forms of trust that come up in different research papers are calculation-based trust (CBT) and identification-based trust (IBT), which is sometimes referred to as "relational trust" or "affective trust" (see Rousseau et al., 1998 for more examples). According to Rousseau et al. (1998), "trust takes different forms in different relationships—from a calculated weighing of perceived gains and losses to an emotional response based on interpersonal attachment and identification." Lewicki et al. (2003) also point out that trust can be based on rationality or emotion, although they are not

necessarily mutually exclusive. Even though economists favour the first kind for it is the most logical mode of interaction between organizations and businesses, it is a universal cognitive mechanism to assess risks and weigh potential benefits in the beginning of a relationship when personal experience is missing. However, as Lewicki et al. (2003) point out that throughout the development of a relationship, in case of positive dynamics, CBT is gradually replaced by IBT. When parties involved in relationship develop common values and have sufficient experience of interaction they may move on to IBT. Other than these two general types of basis for trust (calculation or identification), several others can be distinguished: norms or values (Lane, 1998) or sanctions (Ring and Van de Ven, 1992), although all these factors can be connected to identification or calculation.

An interesting graphic representation or model of trust concept (Figure 1) was suggested by Sutcliffe (2006). While carrying out a research within IT, he reviewed different approaches to trust, identified common features and came up with the following model. Even though this model was designed specifically for electronic trust, in the view of the author, the model summarizes points made above and makes it more comprehensive. An important feature of this model is that it is not necessarily trust between two agents, but also can be applied to products and services, although slightly modified. It can be seen that both actors are interdependent in their cooperation towards a common goal. There is also an uneven distribution of power between the actors with trustee having more resources necessary to reach the goal. Theoretically an agent with more power resources may choose to exploit the other agent (there are risks for the trustor), but that will result in power relations and not in a relationship based on trust. If motivation of the trustor is higher than the assumed risks, with the trustee's reputation (understood as benevolence not to exploit vulnerability of the trustor, competence to fulfil the goal, ethical integrity and predictability of behaviour (Sutcliffe, 2006)) contributing to the desire to invest in trust, then relationship based on trust will be created (precisely the one demonstrated below). According to Lewicki (2012), "trust is about what happens from the point of view of trustor" and assessment of another agent's trustworthiness is often subjective. Therefore the starting point for analysis can be trustor and this agent's perceptions.

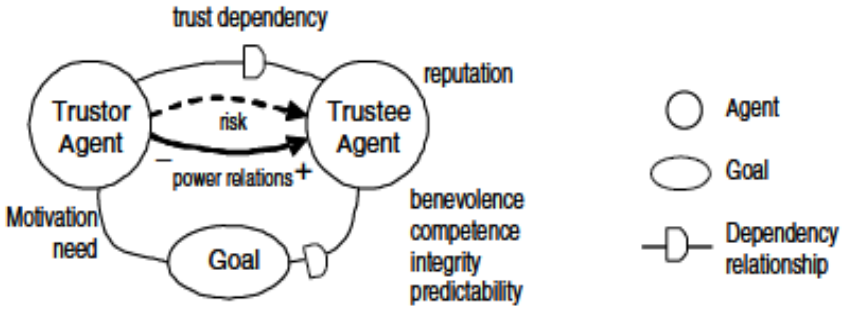

Figure 1. Trust model (see the text above). (Sutcliffe, 2006). For explanation see text above.

Trust and power

As it was mentioned before, not all relationships are based on trust, even though in the long-run it may be more beneficial. Trust is closely interconnected with power as we have seen above.

Power is a complicated subject for research itself and in this study it will mostly be used only in connection with trust. For the most part, the definition of R. Bachmann is used:

“Power is consitutively based on the selection of negative hypothetical possibility regarding alter ego’s (re-)actions, and this is presented to the subordinate actor by the powerful actor as being in neither of their interests”. (Bachmann, 2001, p.350)

Although sometimes the mere presence of power does not mean it will be the main basis for cooperation, in some cases benefits of following a different path than that of trust (power relations) may significantly change the mode of interaction between stakeholders.

*“*When a (potential) trustor finds that he might foster his interests with less effort, faster and/or with less risk if he decides to draw on his resources of power, one should assume that he will in fact take this option, disregarding the positive effects that a trust-based relationship might yield.*”* (Bachmann, 2002, p. 14)

So, unlike trust that is usually based on positive expectations, power is based on negative. In other words, risks are perceived as high and there is a good possibility that the potential trustee may behave unexpectedly. However, it is important to point out, that in order to turn to power; an actor must possess necessary resources to execute it. If the actor is less powerful than the counterpart, power can only be imposed upon them. According to Hardy et al. (1998) sometimes actors create a façade of trust. While the appearance of trust may be created, one of the stakeholders in reality takes on opportunistic behaviour and consolidates its power. When a relationship is based on power, the nature and outcome of it is different (Bachmann, 2001). A deeper understanding of this aspect of trust can prove useful in further analysis. In this respect, the authors (Hardy et al., 1998) identify two forms of trust and two forms of facades of trust. Trust can be spontaneous or generated and power can be either manipulation or capitulation (Table 1). This study mostly focuses on generated trust and does not distinguish between the two kinds of facades of trust, but merely assesses if there are prerequisites for creating them.

Table 1. Trust and its facades (Hardy et al., 1998, p.79)

	Spontaneous trust	**Generated trust**	**Manipulation**	**Capitulation**
Nature of co-operation	Trust-based	Trust-based	Power-based	Power-based
Dynamics of co-operation	Emerges naturally, through gamble	Achieved through management of meaning	Achieved through management of meaning	Achieved through dependency and socialization
Synergy, innovation, and risk	Trust emerges spontaneously; synergy is high; risk is high	Trust is created through equal participation which increases synergy but also increases risk	Dominant partner uses symbolic power to reduce risk and to increase predictability; synergy is reduced	Subordinate acts as a tool of dominant partner; risk to dominant partner is low; synergy is low
Power	A 'win-win' view of power is implicit although power is largely ignored	A 'win-win' view of power prevails as asymmetrical power is decreased	A zero-sum view of power prevails as asymmetrical power is either maintained or increased	A zero-sum view of power prevails as asymmetrical power is either maintained or increased
Meaning	Shared meaning already exists between partners	Shared meaning is mutually constricted by all partners	Meaning is shared but it has been distorted by one partner	Meaning is shared but is imposed by one partner on another
Implications for research/practice	Shared meaning may not as 'spontaneous' as it may appear	Process of creating shared meaning is difficult and may involve conflict	Relationship may look like trust when it is based on power	Power imbalance may mean that partners are not as 'independent' as they may appear

Power is usually viewed as an undesirable option for social cooperation. However, it follows the same goal as trust. It is equally efficient in that respect (Bachmann, 2001), although the quality of relationship is somewhat different. On the other hand, misplacement or breakdown of it does not lead to consequences as dramatic as from trust since no emotional value is attached to it.

Sometimes for the threat of opportunistic behaviour, some kind of control (e. g. contract and/or sanctions) mechanism is used to ensure that some sort of basis for trust is present. In this particular case relevant legislation can be viewed as such a mechanism. This will produce deterrence-based trust (Rousseau et al., 1998), or as Giddens argues (1990), system trust, a central part of which consists of standards of expertise, set rules and procedures, and

institutional arrangements. However, some researchers argue that control mechanisms may hinder building of trust instead of strengthening the base for it:

"When relations do start with formal control, this may not lead to the development of identification-based trust when there is asymmetric dependence, due to the atmosphere of suspicion in which the relation then starts, which can be difficult to turn around." (Woolthuis et al., 2002, p.15)

Most forms of cooperation, however, are based on a mixture of trust and power, but it is important to distinguish which one is dominant (Bachmann, 2001).

The Continuum: from Distrust to Trust

While functional equivalents of trust and power serve to reduce complexity and uncertainty within an interaction, not every interaction necessarily happens with reduced uncertainty. Marsh and Dibben (2005) draw attention to the necessity of distinguishing between trust, mistrust, untrust and distrust (Figure 2). Figure 2 demonstrates the continuum from distrust to trust. Everything below zero level of trust is distrust. When the level of trust is above zero, but not up to the cooperation threshold, it is untrust. Trust, thus, starts above the cooperation threshold. To really trust means to cooperate, so these two notions are inseparable. Even though all these concepts are interconnected, there is certain difference between them that can be important for practical considerations. Mistrust is also an equivalent to trust; it is trust that has been misplaced and betrayed at some point. In other words, trustor should not have trusted trustee. Identifying at which level of trust a certain interaction is can help to determine adequate strategies for promoting higher trust levels. Among those strategies Marsh and Dibben (2005, p.30) mention appealing to other authorities, "adjustment of resources or expectations, manipulation of situations to achieve comfort".

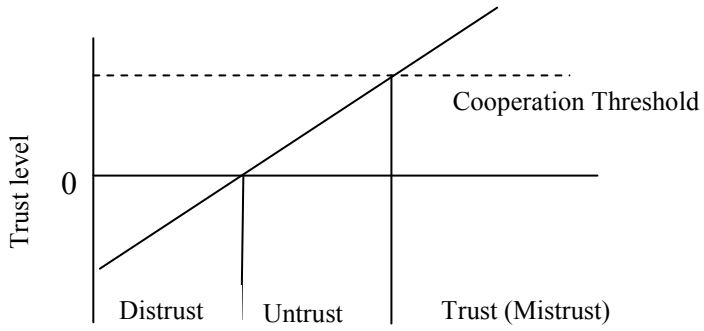

Figure 2. The Continuum: From Distrust to Trust (Marsh and Dibben, 2005). For explanation see text.

The above described aspects of the trust process will be specifically applied to the case of a wind power park project to answer the questions indicated in the paragraph about the goal of the study.

Methods

Methods employed in this work include a literature review and case study. The literature review is subdivided into two parts: legislation and scientific articles. While legislation (European legislation on EIA, Swedish Environmental Code and respective industry legislation) provides formal requirements and regulations upon which the EIA process is to be based, scientific articles offer insight into the theory.

To perform a case study through the prism of the chosen theory it is important to somehow assess trust. Perceived prerequisites for trust and the level of such were measured through surveys with several of the main parties involved in the process. Surveys were chosen over interviews for several reasons. The main reason was time limits, however, in order to stick to the chosen model for analysis, it was decided that somewhat standardized questions will be sent out to all participants. Open-ended questions allowed for extra explanations. Survey questions were presented to representatives in both Swedish and English and al lof them chose to answer in Swedish, which eliminates language barrier factor.

The survey questions are based on certain aspects of the theory of trust (mostly on Sutcliffe's (2006) model of trust) and classification was made according to roles suggested by Hedlund and Johansson (2008). Once actors were identified, major interactions that they enter into were assessed. Each chosen actor who acts as a trustor was then surveyed and the level of perceived trust towards other actors (trustees) was analysed. It was assumed that trustor is the agent with less power resources. Analysing the interaction both ways would require more time and resources than this paper allows. Since it is the trustor who invests in trust, it is assumed that obstacles and considerable risks from the point of view of that agent are more relevant for analysis. Some categories contain only one actor and if they acted as a trustor, they were automatically picked. Consultation parties, on the other hand, were numerous, thus the choice of whom to use was based on documents about the case available for review at that point of time when actor identification took place.

Many things that could potentially be the basis for trust, for example openness to negotiation, reputation, and common values are too complicated to be qualitatively assessed, so there was only an attempt to touch upon them. Another factor influencing the decision not to undertake a very detailed analysis was that several actors under analysis were involved in interactions of a slightly different nature. Although the surveys are similar, they are actor-specific (see appendix) and include open questions, thus answers are going to be unique and there is no need to look for statistical significance. The analysis was carried out as follows:

- perceived risks (if the goal can be achieved or not with the help of trustee)
- how the actor rates importance of interactions with other actors (are there benefits of interacting with others)
- if there was a previous experience of interaction (enhances expectations)
- how the actor perceives predictability of other actors' behaviour (whether positive or negative)
- if information exchange with other actors is adequate (this is an attempt to indirectly measure openness for communication and somewhat benevolence not to exploit vulnerability)

- if there is a common understanding of the EIA process and the project (could be a pre-requisite for forming or sharing common values, which could enhance trust (namely lead to identification-based trust).

Ethical integrity was disregarded due to the case's peculiarities. Ethical integrity is not very relevant in the case of EIA as long as there are guidelines for the process that already regulate possible ethical implications, thus competence should have a higher priority, even though some actors may value nature highly and expect others to share their values. Benevolence and competence also present a certain difficulty for measurement. I have avoided asking direct questions such as "Do you perceive the agent as trustworthy" since understanding of trust may differ between the actors and, besides, they may not admit their real motives or behaviour, thus asking more indirect questions may allow to get a better understanding of those. However, those things that are considered as basic units for assessing trust, *i.e.* expectations, predictability, benevolence, integrity and competence, could in fact be further broken down into smaller units. For instance, ethical integrity is closely connected to the problem of values, but values present a subject for research in themselves.

The current survey is not meant to be a framework for measuring trust, but rather an explanatory attempt to apply the theory of trust as a framework for analysis and reveal the obstacles that come up in such an attempt. It can certainly be improved to come to deeper understanding of trust problems within this particular case, but the goal of the study is to see if trust theory is applicable and not to find out trust issues and improve relations between the actors.

The EIA – A Process

Before moving on to the actual case, it is necessary to give background information on the process of EIA. Below a brief history of EIA in the world and in Sweden is given, followed by a short summary of the stages and the main actors involved in the process. Then general information on wind power in Sweden that is relevant to the case is provided.

History of EIA in the world and in Sweden

The first official regulation for environmental impact assessment appeared in the USA. In 1969 the US Congress adopted the National Environmental Protection Act (NEPA) consisting of two titles. Title I dealt with general provisions on national environmental policy, while Title II established Council on Environmental Quality (CEQ). It was section 102 of Title One (NEPA, 1969) that detailed specific procedures and required "a detailed statement" on the environmental impact of proposed actions, proposed alternatives or mitigation measures and the accumulation of a long-term vision in the assessments. NEPA was applicable only to Federal agencies actions, but each state could implement their own system. Since it was the first precedent in the world, it was by no means perfect and when entered into force in 1970 it was followed by numerous court cases regarding interpretation of new legislation. The world followed those developments closely taking into account both good and bad features of the established system. For instance, many countries preferred to distance themselves from the possibility of lawsuits (Glasson et al., 2005). EIA started spreading around the world beginning with the developed countries after the American example: Canada in 1973, Australia 1974, and West Germany in 1975. However, the real trigger for further adoption of the tool in Europe was EC directive (85/337) that came in 1985.

The research and drafting started as early as 1975, however, this directive concerns Member States and attempts to provide unified regulations and guidelines for different countries and systems; therefore it took some time to complete it. The directive is different from NEPA in certain aspects. First of all, it covers both public agencies and private developers. It provides a list of projects that require an EIA and Member States can then decide case-by-case or based on thresholds or criteria set previously. It also specifies which impacts are to be taken into account. The directive was rather general, but Member states were free to go further in their implementation.

Sweden implemented a requirement for EIA in 1987 based on the EC Directive, but then it only regarded the Roads Act. The Directive only concerns significant impacts on the environment, meaning that when the impacts are found to be insignificant, no EIA is needed, but Sweden went further. According to Hedlund and Johansson (2008), in Sweden the concept of "significant impact" affects the scope of EIA, not its existence after all.

Another milestone on the way to establishing existing EIA norms was the 1991 Espoo Convention on EIA in a Transboundary Context. The convention takes into account the Rio Declaration on Environment and Development (1992) with special consideration to principles 17 and 19: EIA is to be undertaken in case of potential adverse effects on the environment as well as all parties (states) that may be affected should be notified in due time.

The EC Directive 85/337 was to be reviewed after five years, but the report came out only in 1993 and after certain considerations and discussions, an amended version of the Directive

(97/11/EC) came out in 1997 to be implemented two years later. It extended the lists of projects and made the authorities make main reasons and considerations for decision public (minimum information requirement). The Directive was also brought in line with the Espoo Convention. There were further amendments in 2003 and 2009 that respectively were meant to align provisions with the Aarhus Convention on public participation in decision-making and access to justice in environmental matters and including projects on transport, capture and storage of carbon dioxide. All amendments to the original convention were codified into Directive 2011/92/EU.

After some years of implementing EIA as a working tool in Sweden, the Swedish National Audit Office/Riksrevisionsverket (now Riksrevisionen) carried out a research on the practice of EIA in 1995-1996 (RRV, 1996). The research only covered road building and hydropower, but since there are common features in the EIA process, the findings were nonetheless useful. It was found that there were certain drawbacks in practice at that time: generally the procedural regulations were either missing or unclear. More specifically, general public was usually involved too late, no alternative was suggested, and environmental agencies were not formally included in the process. Some of these problems were addressed in the legislation that came shortly after.

In 1998 Sweden adopted the Environmental Code that entered into force 1999. Before then environmental legislation was spread out between 15 different laws for separate industries. The Environmental Code incorporated 15 environmental objectives mentioned in Sweden's national strategy for sustainable development The EIA purpose; function and process are described in chapter 6 in the Code. It also states when an EIS is needed. An EIA is always needed when a project presupposes applying for some kind of permit. Throughout the years the Code has been revised many times.

During the same year another important document was signed by Sweden; it was the Aarhus Convention on access to information, public participation in decision-making and access to justice in environmental matters. Even though it was signed by Sweden in 1998, the Convention was ratified only in 2005. Sweden made some reservations as well in regards to certain articles, mostly dealing with a review procedure of a decision before the court of law (UN Treaty Collection, 2012). Three pillars of the Convention (access to information, public participation and access to justice) have direct connection with the EIA process and the role of general public in it. According to it, the public should be provided with sufficient information and be given an adequate timeframe to realize their right to participation in the process. So far access to justice is still limited by national legislation and this concerns the ability of certain actors to challenge and review decisions made by public authorities, nonetheless, the Aarhus Convention was an important step on the way to better handling of environmental matters.

Therefore, the Swedish EIA system has been shaped under the influence of the European Directive, but after all developed its own characteristic peculiarities. Even though it has history now, there are still things to be improved, but as we have seen before, it is not static and there are constant developments.

Stages of EIA

The duration of EIA usually depends on the scale of the project and sometimes a project can even be subdivided into several sections, but it is a lengthy process consisting of several stages. EIA should cover not only new projects, but changes to existing projects too. Overall,

the Swedish procedure can be divided into two big processes: one of planning and one of applying for the permit. The planning stage results in EIS and is a responsibility of the project developer, while during application for the permit a relevant authority approves EIS and decides if the permit should be granted. The planning stage can be further subdivided into screening, scoping, alternatives, and preparation of EIS. Review of EIS and decision-making are a part of applying for the permit. The last formal stage of EIA is follow up.

Screening

Since preparation of EIA is a lengthy and costly process, it is important to determine whether the project is going to have significant adverse impacts on the environment at an early stage. According to EC guidelines (EC, 2001), if the project is not listed in mandatory or exclusion lists, corresponding authority should decide, case-by-case, whether EIA is needed. A description of the proposed project should be given to the County Administrative Board (CAB or *länsstyrelse* in Swedish) with its location and impacts on the environment and people living in the vicinity. This is usually done at the screening stage, when some projects may be "screened out" due to insignificant impacts. This is called FONSI (finding of no significant impact), which usually results in the decision that EIS is not necessary. At this stage only several actors are interacting: developer, EIA team and CAB.

Scoping

When a decision is made that EIA process is needed, the next step is to consider all previously identified impacts and determine whether they are going to be significant, insignificant or of unclear significance. Such classification should be justified and research is to be carried on to quantify impacts if possible. This stage of the process is one of the most important since it sets up the quality level of the whole process. Besides focus on impacts, the EIA team is responsible for establishing a reference point, the so-called bottom-line (no-action alternative). Bottom-line is the description of the current state of affairs with the environment as well as no action alternative of how this environment will naturally change if the project is not implemented. It is important to do that, so one can see if the project will improve or degrade the environment. Sometimes that may only contribute to the justification of importance of the project and clarify its purpose. It is also important to take into account existing development plans in the area and the governmental or local policies to make sure there is no conflict between them. For instance, environmental targets (such as reduction of CO_2 levels) and environmental quality norms should be studied. Due to the purpose of this stage, it has to involve consultation with other parties, since there is an overwhelming amount of information to be processed and knowledge is spread out. Competent authorities may be more aware of future development plans and policies to be considered, while general public has a chance to express their opinions about how the project will affect their lives. This stage of the process is when most actors are involved or at least should be involved.

Alternatives

In order to choose the most environmentally sound alternative for the project, several have to be developed and analysed. A description of different alternatives and their impacts should be evaluated, which will demonstrate how decisions were made and why. In case of some problems with the project, a re-examination of alternatives may save the developer money and time.

Preparation of EIS/Presentation

During the process much information and knowledge is accumulated. Since the overall purpose of EIA is to come up with the best way of implementing a project, attention to details is important. On the other hand, most information may be too technical for non-experts to understand, so it has to be processed in such a way as to produce a comprehensive document. One of the requirements for an EIA submitted for review is that there should be a non-technical summary. Besides, according to principles of environmental impact assessment best practice from IAIA (IAIA, 1999) an important principle in EIS should be impartiality. Conclusions should contain impartial quantified (if possible) impacts and concerns of the communities affected by the project as well as alternatives and mitigation measures.

Review and Decision-making

Since an EIS is meant to be a basis for a decision whether a permit for the project to be granted or not, the quality of EIA is reviewed in order to see if it can serve as the basis for decision. This review is performed by the Environmental Permit Office (EPO, miljöprövningsdelegation) usually within the CAB or the Environmental Court. They decide whether the quality of EIA corresponds to requirements of whether the EIS can be a basis for their decision. Then the same authority based on EIS issues a permit or not. Interesting point here is that the decision whether EIS meets the necessary requirements cannot be appealed unless the decision about the permit is appealed too (Environmental Code, Ch. 6 §9). Sometimes a permit is granted with certain terms and conditions for implementation (Ibid, Ch. 16 §2).

Follow up

Since an EIA is based on estimations only, actual figures in environmental impacts can differ, thus it is important to follow up on the project. Usually this stage is presupposed to monitor environmental impacts and improve future practice. Through environmental monitoring it can be checked if recommended terms and conditions were met, if mitigation measures are adequate enough and if any further adjustments are needed. It is also beneficial for future EIAs to measure actual impacts and compare them to estimated ones to improve quality of future projects. In Sweden this is usually up to a developer who is responsible for self-monitoring. According to the Environmental Code (Environmental Code, Ch. 26, §20), the developer whose project required a permit has to send an environmental report to relevant authorities every year. Even though this stage is formally considered to be a part of EIA, in reality it is a part of project management since it begins when the project is implemented.

Main actors involved in the EIA process and their roles

It is important to define the actors that are always involved in the process no matter what kind of project it is. Their roles and responsibilities are defined according to legislation and are mostly based on the Environmental Code. At this point we will look at the most important actors without connecting them to the case. The starting point for classifying actors in such a way was the above mentioned research by Hedlund and Johansson (2008).

Developer

Developer is the key figure in the EIA process. Developer is the one who undertakes the project and is solely responsible for acquiring enough knowledge on how to implement a project in such a way that there is minimal or no damage to the environment and human health (Environmental Code, Ch. 2 §1-2). It is also the actor who is involved in the process the longest since the initiative for the project comes from this party. Chapter 6, §10 of the Environmental Code specifies that the costs of the procedure are to be covered by the one who applied for the permit, which most likely means the developer. Therefore this actor is not only pursuing its interests of implementing the project, but is also responsible for organizing everything financially. The developer may be an investor or acting on behalf of investors. Developer decides on who will carry out an EIA and overlooks the process as well as applies for all the necessary permits, a part of which is to prove that there was a consultation with regulating agencies and general public.

Consultant – EIA team and other external consultants

This is the actor who carries out the research: identifies all the impacts, possibly quantifies them, and suggests alternatives and mitigation measures. The EIA team can be either internal or external. If the developer has enough resources and expertise within their own company, then an EIA team can be comprised of internal employees providing a higher level of trust since there is more knowledge about trustworthiness of those people. However, in many cases a developer has to employ external consultants, which creates problem of choice. Besides, availability of several options on the market for environmental consultants, there is a higher chance of no experience with that particular consulting company, which means trust would have to be built from scratch.

In some cases when the project involves many different parts, the developer may have to cooperate with some other company to get their expertise and service in order to implement a certain part of the project. For example, in the case of wind power, the developer may not have sufficient resources to oversee the connection to the grid all by themselves, so they cooperate with another company that specializes in that field. This sort of relationship is similar to that of an EIA team, but it seems that in some cases it may be more of an equal partnership than power asymmetry, however, this will not be analysed in more details in this study.

County Administrative Board – Consultation party and decision-maker

Another important actor that is involved in the process from the early stages till the end is County Administrative Board (CAB). It is they who decide if an EIA is needed, unless it is already clear from legislation (usually web-sites of CAB have lists of which projects may have significant environmental impacts). They also play a major role in the scoping process, helping the developer to distinguish important from unimportant. They act as an important consultant to the developer as well. Depending on the project, it is either environmental permit office (EPO) within CAB or environmental court who is a decision-maker, i.e. decides whether an EIA qualifies to be the basis for a decision of whether the permit should be granted (quality check) and then subsequently grant a permit or not.

Consultation parties

Even though consultation parties classify as a single group, it is by no means homogeneous, although roles of different actors that fall under this category are very similar. As it was stated before, CAB is also a consultation party in earlier stages of the project (then it acts as a reviewer and possibly a decision-maker), however, in this case it is mostly regulating agencies, municipality and general public that are relevant.

Regulating agencies are the ones that are responsible for a certain area (for example, waterworks, energy, infrastructure and so on) and they give advice to the developer and make sure that the project complies with existing norms within that area. In certain cases they may also be issuing some kinds of permits necessary for the projects, for example, electricity franchise from the Energy Markets Inspectorate.

Municipality has a very special role in the process of establishing a wind power park. First of all, according to the Environmental Code (Environmental Code, Ch. 16 §4) the permit for a wind power park can be granted only with consent of the municipality. Therefore this consent has to be confirmed; otherwise a permit cannot be granted. Besides, municipalities have monopoly over planning inside their borders. They develop comprehensive and more detailed local plans and make sure those plans are followed. If there is an area of state interest of some kind within the borders of the municipality, it is their responsibility to make sure that state interests are carried out. The developer is supposed to cooperate with the municipality over the local plan and provide adequate information about their project, so that local plan is up-to-date.

Another significant participant within the group of consultation parties is the general public. As it was noticed before, there has been a considerable push to involve general public in the process of EIA more. Both international and national laws have been changed to account for this requirement. However, there are still certain problems in this respect. The developer is required to consult with those people who are to be affected by the project, but it is not very clear how to define "being affected". EU Directive (2011/92/EU, Ch. 1(2)) gives the following definition:

"'public concerned' means the public affected or likely to be affected by, or having an interest in, the environmental decision-making procedures referred to in Article 2(2). For the purposes of this definition, non-governmental organisations promoting environmental protection and meeting any requirements under national law shall be deemed to have an interest."

This is a very broad definition and it may be hard to distinguish between who is concerned and who is not. This definition involves both the community living in the vicinity of the project site, therefore ones being physically affected by different sort of disturbances, and those who have general interest, like NGOs. Nevertheless, it is required that the public concerned has access to the materials of EIA and can express their opinion and concerns about the project. It is a requirement for the EIA process, therefore it should be confirmed that consultation took place and public interests were taken into account. However, an important peculiarity of the Swedish system is that the right of general public to challenge decision in court is limited. The decision can be appealed by those who are affected by the project (again unclear), different authorities or NGOs. It is obvious that in the case of a regular person, there is a need for time and money to appeal to court, whereas NGOs may have the necessary

resources, but have to comply with certain set of rules (Environmental Code, Ch. 16 §13): to be non- profit; to have minimum 100 members; to have been working in the area of environmental protection or environmental interests; to have been working in Sweden for at least 3 years. In Sweden, for example, the Swedish Society for Nature Conservation (Naturskyddsföreningen) can be of help in that respect. Alone individuals may feel rather powerless and not really able to influence decision-making.

Now it is time to move on to a general description of the case, which will be background information on the case necessary to follow with a detailed analysis.

Description of the project (industry, goals)

The actual case in this study is a project of the Tönsen wind power park. Establishing wind power production requires an EIA according to the law, because it is classified as dangerous for the environment (*miljöfarlig* in Swedish) and may lead to significant environmental impacts. It is important to give some background information on organizing the project dealing with wind power to demonstrate how complicated and lengthy the process is due to different conflicting interests. Conflict of interests is the main drive behind consultation between the actors. Representatives of different interests are the actors interacting with each other in order to pursue the goal of bringing the project in line with the idea of sustainable development.

As it was mentioned before, Sweden is committed to sustainable development. Besides, being a party to the United Nations Framework Convention on Climate Change (UN FCCC), the state is quite ambitious about reducing CO2 emissions and investing into renewable energy resources (Prop. 2009/10:155). In order to achieve planned environmental goals, the government puts an emphasis on wind power as one of the most important renewable sources of energy that has not reached its full potential in Sweden yet. There is a national planning frame to reach the level of production of electricity from wind power of 30TWh in 2020, 20TWh coming from onshore wind parks and 10TWh from offshore parks (Swedish Energy Agency, 2007). That means wind energy share should grow and there are different regulations from the government so that it happens. For instance, since 2004 Sweden has been establishing areas of national interest for wind power. Today there are 423 such areas divided between 20 out of the 21 counties in Sweden. However, the process for identifying such an area involves many stages. First of all, the area must have sufficient size (not less than 1,5km2) and wind conditions (average annual wind speed of minimum 6.5m/s at the height of 71 m) (Gävleborg County, 2007). Once this condition is met, the area should be examined for potential conflict of interests, such as, for example, buildings of different kinds, historical monuments, nature reserves or key biotopes, if the area is used for recreation and so on. In case of nature reserves, there are several types of protected areas and one of them is Nature 2000, an EU ecological network that makes sure that the most valuable species and habitats are protected. Trying to develop a project on such a territory can conflict with European interests. Counties have had proposals from municipalities which were later sent to the Swedish Environmental Agency, which has finally confirmed if the area can be considered of national interest. It is easier to examine if interests overlap in a certain area on a local level, however only an EIA gives a more detailed view how a project can affect different interests.

Tönsen Wind Park Project description:

The Tönsen wind power project is a project for establishing a wind park with 42 turbines with maximum height of 150 m and planned production of electricity of 280 GWh (O2 Vindkompaniet, 2011). The project is carried out by O2 Vindkompaniet in cooperation with Bergvik Skog AB. The location is in Gävleborgs county, Bollnäs municipality, 7 km Northwest of Lingbo and 11 km south southwest of Kilafors. The area is an area of national interest for wind power (X012) and is classified as first priority for development by Bollnäs Municipality in their addition to the comprehensive plan with focus on wind power (Bollnäs kommun, 2010). The area was to be located in three municipalities: Bollnäs, Ockelbo and Söderhamn. However after several adjustments the project is going to be located only within Bollnäs municipality.

The description of X012 area of national interest, southern Tönsen (after Bollnäs Kommun, 2010):

"There are two parts that stretches out to Ockelbo and Söderhamn Municipalities. In the southern part of the area there is a wetland forest. Wetland forest is also present in some areas of middle and eastern parts. Regulations of the Environmental Code shall be observed. Forest use shall be given particular consideration in accordance with 30§ Forest Conservation Law and appropriate provisions and consultation with general public. There is an ancient monument within the region, a house foundation by Acktjärbodarna. About 75 turbines with 225 MW output can be placed in the area.
Policy: landscape image, natural values and possibilities for outdoor activities shall be regarded. Ancient monuments shall be regarded". (Translated from Swedish by the author)

Landscape of the area is dominated by forests with some marshes and lakes (see Picture 1 for landscape). As one can see, potential obstacles (wetland forests, recreational activities) on the way of developing the area for wind power were identified at early stages even before the area became a subject to an EIA. However, once it was decided to implement a particular project in the area, a more detailed analysis in the form of EIA was carried out. Naturally consultation with different parties who could point out various consequences of the project was carried out. Those consultations that took place are an example of interaction between the actors in the process.

Picture 1. Photomontage from Tönsen. Distance 2,2km. (O2 Vindkompaniet, 2011)

The project was started in 2004. In 2006 the CAB informed the developer that the project will produce significant environmental impacts that require an EIA (Gävleborg CAB, 2011, p.5). Completed EIS was sent to the Environmental Permit Office (EPO) within CAB on the 16 June 2009 and then supplemented with additional data several times throughout 2010, and on the 29 June 2011 the decision about granting the permission was finally made (Ibid). Even though the EPO pointed out that the EIS lacked a description of impacts from ice and consequences for Nature 2000 region, birds and bats, the EIS in their opinion met the necessary conditions. Since the decision was announced, it was open for appeal in the court.

The decision was appealed by several parties who assumed that their interests were not taken into account: Bollnäs Municipality (Environment and Planning and Building Committee), Society Finnsskogsriket, Ornithological Association of Gävleborg County, Society for Conservation of Nature Hanebo and two individuals living in the region. CAB and O2 were the respondents. Among the reasons for appeal were neglecting the importance of outdoor activities such as fishing, disturbance of sensitive nature and biodiversity by noise, proximity to Nature 2000, change of landscape image and possible decrease in prices for property in the area. Most parties did not oppose the project on the whole, but rather insisted on certain conditions for implementations such as increasing area of protected zones near the beaches or places of birds nesting (there are three species of special concern in the area: osprey, black- and red-throated divers), and monitoring impacts on birds. Society for Conservation of Nature Hanebo also pointed out that other wind park projects in the vicinity were not taken into account for the goal of energy production - moreover they stated that EPO provided incorrect number of turbines to be built in the county (Gävleborg CAB, 2011, p.7). They also insisted that commercial interests outweigh nature and environment interests (Ibid). The developer has come up with a revised plan with maximum 42 turbines and larger protected zones in regards

to bird life and the natural environment (Ibid, p.13). The CAB, on the other hand, stated that the EPO's decision was justified.

The outcome of these court proceedings was changing the project and permit from maximum number of turbines from 55 (the number in application and the permit) to 42 (as it was mentioned in the current version of the project description presented above).

Therefore currently the project has the necessary permits and it can now enter the implementation stage.

Case Study

Actor Identification and Classification

Project management of a wind power park is a complicated and time-consuming process and EIA is only a part of it, which is closely intertwined with other activities. The more activities have to be carried out in order to implement the project, the more actors are involved in the process (mostly consultation parties). Besides the actual impact of wind power park operations, such things as building appropriate infrastructure and connecting wind turbines to the electric grid also have to be considered both in EIA and general project management. That only brings in more actors such as subcontractors and regulating agencies (for example, the Swedish Transportation Authority, Energy Markets Inspectorate).

According to classification and a short description of the roles above, it is possible to name the following actors in the process of EIA for the Tönsen wind power park project (Table 2). It is important to stress that this is not a full list, just a selection that came up in the papers studied for this case to give a general idea of how many parties may be involved.

Table 2. Actor Identification and Classification in the Tönsen Wind Power Park Project. This table demonstrates that the number of parties in the process is great. However, most of the parties may not be aware of involvement of others and cooperate mostly with the developer. Developer is the key figure around which most interactions circulate. The second key figure in this process is CAB, because they are a consultation party, reviewer and decision-maker.

Role	Actors
Developer (D)	O2 Vindkompaniet, Bergvik Skog AB (partner and land owner)
Consultants	Fortum
Consultation parties (CP)	Gävleborg CAB, Bollnäs Municipality, SGU, Society Finnskogsriket, Gävleborg County Ornithological Society, Society for Conservation of Nature Hanebo, Swedish Environmental Agency, the Swedish Transportation Authority, Energy Markets Inspectorate; National Board of Housing, Building and Planning; Swedish Armed Forces; Communications Authority; Teracom AB; Swedish National Board of Forestry, etc.
Reviewer (R)	EPO within Gävleborg CAB
Decision-maker (DM)	EPO within Gävleborg CAB, Environmental Court within Östersund District Court

Within this work it is impossible to assess all the existing relations in the project and it may not even be necessary, because the role of some of them is not that significant in the process of EIA. Therefore, it is necessary to identify key players, whose interactions will be studied in more details and level of trust between them will be assessed according to the theory chosen for analysis.

Two figures already mentioned, O2 Vindkompaniet and Gävleborg CAB are falling into the category of most interesting for further consideration. Due to peculiarities of the case, namely that the decision about the permit was appealed, Bollnäs Municipality and Society Finnskogsriket will also be considered in more detail.

O2 Vindkompaniet AB (D)

The subsidiary of O2, roots go back to 1991 when 11 wind farms presently operating in Sweden were developed by O2 Vindkompaniet. Two projects are currently under construction and over ten are under development. It is possible to conclude that the company has experience and necessary expertise to carry out wind power projects.

Bollnäs Municipality (CP-1)

The municipality is located in Gävleborg County. The term "municipality" is very broad and general and this actor is not necessarily homogeneous in itself. The highest decision-making body is Municipality Representative Assembly (RA), which consists of 45 members (with fourteen seats occupied by Social Democrats, them being the majority). Representative Assembly decides if they support a wind power project. On the other hand, there is Environment and Planning and Building Committee (EPBC) that deals with questions in the area of building and environmental protection. There are seven members in the Committee. So even though the Municipality supports the project, a part of the municipality was one of those who appealed the decision in the court.

Society Finnskogsriket (CP-2)

Since definition of general public is rather broad, it was decided to interview an NGO as a representative of general public. Contacting individuals can prove to be harder, besides their interests are more of an economic nature (as it was indicated in description of the court appeal before). Society Finnskogsriket is a non-profit union meant to develop the area of Finnskogsriket between Gästrikland, Hälsingland and Dalarna counties. Basically it is a forest area with cultural artefacts that the society tries to promote as a natural recreation area. A part of it is located in Bollnäs municipality. There are 258 members, 46 of which are organizations.

In the case of appeal, the court has decided that the Society has no right to appeal according to the Environmental Code, Ch. 16 §3 (Gävleborg CAB, 2011, p.14). The area of Finnskogsriket's work is to keep track of and protect natural, cultural and historical sites within their geographical area and not solely protection of the environment. Despite being affected by the project, due to peculiarities of the Swedish legislation, the Society could not protect their interests in court. The chairman of the Society admits that when appealing to the court, they did not know about the legislation in detail. No further actions regarding the project can be taken by them.

Even though this particular agent does not seem to be ideal for analysing interaction between the developer and general public due to their peculiar status and not being clearly an environmental NGO, the opinions and strategy taken by the Society is similar to those of other environmental NGOs who took part in the EIA. Moreover, precisely because the situation with them not falling under the definition of public concerned, this highlights practical difficulties within the EIA process and legislation implementation. Thus the author

assumes that there is no need to carry out additional research with other representatives of general public, although it is not to say that those may not contribute to a better understanding of dynamics.

Now that the actors are identified and classified, it is time to turn to their interaction.

Actor Interaction

In order to identify all possible interactions between the actors, it can be helpful to build an Interaction Matrix (Table 3). The Matrix presents 6 interactions, but points out that each of them can be analysed either from the point of view of one of the actors or another with possibly different conclusions depending on their role. This brings up the concept of reciprocity (see Discussion).

Table 3. Actor Interaction Matrix.

	D	**R/DM**	**CP-1**	**CP-2**
D		X	X	X
R/DM	X		X	X
CP-1	X	X		X
CP-2	X	X	X	

Therefore, there are six unique relations available for analysis, but each of them can be analysed from the point of view of both trustor and trustee. It should also be noted that these are only all potential interactions and not necessarily those that are of major significance. The double-sided arrows below merely demonstrate that it is an interaction and do not at this point distinguish between trustor and trustee.

1) D ↔ R/DM
2) D ↔ CP-1
3) D ↔ CP-2
4) DM ↔ CP-1 (through D)
5) DM ↔ CP-2 (through D)
6) CP-1 ↔ CP-2

Moreover, interactions 4 and 5 are not relevant since the decision is based on EIS, which comprises interests of consultation parties. EIS is presented by developer, thus there is no direct interaction of consultation parties and decision-maker. This leaves us with four interactions to analyse. It was decided to analyse the interaction only from the point of view

of the trustor (the agent who invests in trust), who is more vulnerable in these relations. It is necessary to point out that in this particular case the court appeal created a whole new set of relationships and the main decision-maker was a third party – the Environmental Court. However, that new level of interaction will be disregarded in this work (it is ideally not the most common happening in the EIA process; court appeals can be avoided at earlier stages by improving relationships between other parties). Even though such course of events cannot be ignored, more of a general picture of interaction will be considered.

In the interactions identified above the distribution of roles is as follows (if assumed that those possessing more power are a trustee): the developer is a trustor towards reviewer/decision-maker; consultation parties trust the developer; consultation parties may choose to trust each other, but this relationship is not necessarily presupposed by organization of the EIA process. CAB does not act as a trustor towards any of the agents; therefore there is no need to interview that agent. Let us consider aspects of each interaction in more detail. Detailed descriptions of the interactions below are based on surveys (see Appendix).

1) Developer (O2 Vindkompaniet)-reviewer/decision-maker (Gävleborg CAB)

The common goal of this interaction is essentially to make sure that EIS meets the requirements to be a basis for the decision about the permit and eventually the permit itself. For the developer this goal allows to implement the project and have financial benefits, whereas the CAB gets more sources of renewable energy with minimal environmental impact. In this interaction the CAB has the power, so it is the developer who is a trustor and the CAB, trustee. This is a well-regulated relationship in which developer is fully dependent on the decision-maker. Of course, the quality of EIS is a responsibility of the developer, through which the final goal can be reached. In this particular case the EIA was carried out by an internal team at O2 Vindkompaniet, therefore it was a closer relationship between the developer and the EIA team and was probably easier to control the outcome of the process. Roles of both actors in this interaction are pretty clear and well-defined. Developer submits EIS and decision-maker makes a decision. Risks for not getting a permit are not very high for the developer, since all the requirements for EIA quality are usually published on the web-page of the CAB. The outcome of interaction, therefore, is very predictable.

The survey of the developer's attitude was addressed to a representative of O2 Vindkopmaniet working with Tönsen Project. The survey filled out by the developer shows that the actor rates the interaction with the decision-maker as important (the goal cannot be reached without this interaction) and perceived their risks as minimal since they estimated chances of getting the permit as very likely. Predictability of behaviour of the trustee (CAB) is rated as average. An important factor contributing to the relationship based on trust is that there was previous experience of interaction between these two actors, Fallåsberget Project (O2 Vindkompaniet, 2012). Information exchange between the two actors is also perceived as adequate. The unique feature of this interaction is that many factors are not of much importance (such as competence), since in order to achieve their goal, the developer has to enter into this relationship, there are no alternatives. Besides, as it was mentioned before since there are very clear guidelines on how to behave in this relationship for both actors, the benefits certainly outweigh the risks and there is a good basis for trust. Granting the permit is a win-win situation for both agents (see Table 1); therefore it is reasonable to assume that this is not a façade of trust.

2) Developer (O2 Vindkompaniet) – Consultation party-1 (Bollnäs Municipality: Representative Assembly; Environment and Planning and Building Committee)

Since the developer is required to get approval of the municipality and demonstrate that there was a consultation during the EIA process in the EIS, this is their goal. The municipality needs to make sure that a conflict of interests in connection with the project, if such is present, is settled and their opinions are taken into account while implementing the project. The relationship is somewhat two-sided, because without the consent of the municipality, the developer cannot implement the project. The municipality has less power over the project, so they are a trustor in this case. However, there is a possibility to appeal the decision of the CAB about the permit in case some interests are disregarded. Such an option serves as a safeguard for a consultation party and decreases power asymmetry, and thus chances for opportunistic behaviour of the trustee. This is an example of deterrence-based trust when trust is based on potential sanctions, norms or institutional arrangements (see Rousseau et al., 1998 for more references).

In this particular case the situation with the actor (Municipality, spelled with a capital letter it refers specifically to Bollnäs) is very peculiar, but may be somewhat characteristic and recurring in other cases. Even though in this paper the Municipality is treated as one actor, there was a conflict of interest within. That became obvious due to the fact that the decision by EPO within CAB was appealed in court by Environment and Planning and Building Committee, therefore I have decided to address surveys to both the Representative Assembly (RA) and the Environment and Planning and Building Committee (EPBC).

Analysis of the results of the answers points to significant differences in understanding the goals of the project as well as levels of trust towards the developer. Naturally those differences can be attributed to differences in work tasks and values, which are quite subjective. However, as it was mentioned before, trust is very subjective, too. Analysing internal relations within a political organization is complicated by such aspects as party affiliation, heavy workload of politicians (and possible lack of time to consider all the issues in detail) and so on.

According to EPBC, the Environment and Planning and Building Committee was involved in the case already after the decision by the Representative Assembly to support the project had been made. Even though both bodies understand the purpose of the EIA process in the more or less same way and both rate interaction with the developer and general public as very important, this is where common views stop. While RA states that EIA should point out conflicts of interests between flora, fauna and people (RA, Bollnäs Municipality, 2012), EPBC also notes that conflict of interest should be taken into account and acted upon (EPBC, Bollnäs Municipality, 2012). It seems quite interesting that while RA sees the project's advantages such as creation of working places and "most importantly being an alternative source of energy contributing to phasing out nuclear power " (Bollnäs Municipality), EPBC does not know about any advantages the project may offer. This may also be connected to EPBC's answer regarding not having received sufficient information from the developer.

There was no previous experience of interaction with the developer from either part of the Municipality. RA rates risks as well as predictability of developer's behaviour as average. Taking into account interests of the Municipality over alternative sources of energy, it seems that trust is a preferred option for RA. However, with regards to EPBC the picture is different. EPBC assessed chances of their interests to be taken into account by the developer as

minimal, which translates into high risks. Predictability of behaviour is also rated as low. The fact that according to EPBC developer did not provide sufficient information can be treated by EPBC as indication of unwillingness of the developer to be open to communication. Interaction had to happen and relationship was created, however risks seem to outweigh benefits in the eyes of EPBC. Therefore it is logical to assume that EPBC was leaning towards distrust.

It is an interesting situation that a part of the organization is ready to invest in trust and another is clearly in for distrust. Without detailed analysis it can be assumed that there was a case of mistrust: first the Municipality approved the project and then appealed it in the court. Such a situation demonstrates that sometimes one actor should not be treated as one homogeneous entity. The reasons for it can range from a difference in party affiliations and interests to problems with internal communication within the Municipality to a lack of clear common goals. This paper is not going to look into those issues, but rather to point out that such a situation is not necessarily unique to only one municipality. Such dynamics may contribute to minimizing environmental impacts (the court appeal resulted in a smaller number of turbines), but they also prolong the permit process and require allocation of additional resources since the court appeal could have been avoided if certain interests were ensured before then.

3) Developer (O2 Vindkompaniet) – General public (Society Finnskogsriket)

The developer has had consultation with the general public (individuals living in the area and concerned NGOs). Society Finnskogsriket appealed the decision in the court, but they were refused the right to express an opinion in court last winter. Therefore their interests did not get any support from the state. Even though during consultation they could express their opinion, they were not considered as representatives of the general public by the developer (O2 Vindkompaniet, 2012). Thus the developer did not really see the need to cooperate with this particular NGO.

The developer is required to prove that there was a consultation with the general public and it is up to them how to set it up. Involvement of the general public can include sending out information brochures about the project and holding public hearings. The EIA process without consultation with the general public is considered incomplete and may not lead to permit (SFS 1998:808). The developer has to interact with general public in order to get the permit, there is no other option. However, general public may refer to numerous actors including individuals living in the area or in close proximity to the planned project site, and different NGOs concerned with the environment. All that the developer needs from them is an expression of their opinion, so then the project can be fixed to take their interests into account if necessary.

Naturally there is always conflict of interests and not all of them can be adjusted. Also those interests may have different degrees of importance to the general public and, for instance, decrease in property prices will affect people more considerably than the change in landscape image. The weighing of interests can also be controversial. The developer is the one who decides which interests are more important for consideration and how to address them; therefore more power is on their side. Representatives of general public are free to express their opinion or not, there is no regulation requiring them to do so. The only motivation for them to enter interaction with the developer is to make sure their interests are taken into account. The safeguard for this interaction is the ability to challenge the EPO's decision in

court. Thus this interaction presupposes deterrence-based trust as in case with municipality. However, unlike in previous interactions in this case interaction can be avoided if there is distrust and risks outweigh benefits.

While there was no previous experience of interaction with O2 Vindkompaniet, chances of ensuring that Finnskogsriket's interests are taken into account were estimated as low, which implies risks were considered high. Moreover, the importance of interaction with the developer was rated as very low. It was commented that "There is no point in communicating with the developers." (Society Finsskogsriket, 2012b). Predictability of behaviour of the developer was also perceived as low (did not know what to expect). Even the fact that there was enough information received from the developer did not help to contribute to trust-building, especially since the organization views the whole EIA process organized by the developer as more of a formality than actual tool for improving the project (*Ibid*). It is important to point out that in comments it was noted that all the information from the developer was "secondary" and came from authorities or the Internet. Obviously, this particular actor not only does not see any basis for trust-building with the developer, but is not even interested in entering the interaction. From the answers of Finnskogsriket it is clear that their position is very opinionated and emotionally-loaded. They are very subjective about their interactions with other actors, especially the developer. Nonetheless, such attitude, by no means, complicates analysis in terms that at least their position is very clear and can hardly be misinterpreted. In this interaction it is possible to say that since interaction at some point is inevitable (opinion has to be expressed), these relations are not based on trust, but rather on power. While the Society expresses their concerns about recreational activities in the area, the developer chooses to regard those as less important. Here it is not a question of who is right in that respect, but rather that disregarding other actor's interests is viewed as abuse of power and weakens possibilities for trust-emergence.

It is viable to say that this representative of the general public clearly chooses distrust, especially in their comment not to deal with the developer, which is an indication of unwillingness to cooperate. However, interaction has happened and it was not characterized by trust, thus, it can be assumed, power relations emerged. It is also possible to say that the developer may be very interested in creating a façade of trust while having to consult with the general public.

4) Consultation party (Bollnäs Municipality) – Consultation party (General Public: Society Finnskogsriket)

This interaction is not directly presupposed in the EIA process as each consultation party individually expresses their opinions to the developer who has the power to consider them in carrying out the project. The benefits of this interaction are not very clear either. The logical assumption could be that by uniting consultation parties could balance out power asymmetry with the developer and thus have higher chances of ensuring their interests. However, there are two factors influencing such course of events. First of all, consultation parties would have to share interests and ensuring those interests would be their common goal in the EIA process. Also the right to appeal is given to different consultation parties and already somewhat balances power asymmetry and serves as a basis for deterrence-based trust (with the developer).

In this case study the Municipality and Society Finnskogsriket could be cooperating. At a closer look, it turns out that there was previous experience of interaction between the

Municipality, Finnskogsriket and Society for Conservation of Nature Hanebo (one of the appealing parties). The latter is a member in the Society Finnskogsriket and the Municipality initiated a joint initiative as a result of which Finnskogsriket was created (Society Finnskogsriket, 2012b). Previous experience of interaction means that there is a better understanding of trustworthiness of the parties. It seems that out of all the consultation parties, the Municipality has more power due to their right to veto the project, thus they could be a trustee. Empirical experience shows that consultation parties chose to act separately in their expression of opinions and decision to appeal the case in the court. Moreover, the respondent (2012a) noted that the earlier political majority in the municipality could be characterized by "environmental populism and wind power naivety". Such opinion presupposes negative expectations from the other party and does not demonstrate willingness to trust. Since there was no direct interaction between these two parties during the EIA process, no survey was carried out to measure the perceived level of trust. It is possible to speculate that judging by Finnskogriket's comments, they would choose distrust. Maybe they could cooperate with EPBC of the municipality since they seem to share similar views, but it is only a speculation.

Overall, even though this sort of interaction is possible, it does not seem very relevant for the process of EIA, where each representative of the general public is free to express their opinion individually (or on behalf of their organization). Since the Municipality is a consultation party of a different sort, the general public could try to cooperate with them. However, the whole set up of political organization already presupposes cooperation with the general public since the Municipality consists of politicians elected by the general public and they are meant to protect interests of their electorate anyway. It is logical to conclude that interaction between the consultation parties is not so important for the process of EIA, whereas the interaction of the consultation parties with the developer prove to be more beneficial for minimizing negative consequences of a project.

Discussion

Firstly, this chapter presents major limitations to this study that will be further discussed in the following parts. The discussion of the results itself is going to be organized into two parts. The first part will correlate with the research question of whether trust can be used as a framework for analysis of actor interaction in the EIA process, thus, theory-related issues including identifying the problems that arise with application of the given theory and in what ways it can be improved as well as suggestions for further research. The second part will deal with practical issues in relation to the process of actor interaction in the EIA process. This paper does not specifically focus on the case, rather on theory; however, some obvious practical considerations cannot be ignored. Besides, further research in this area could benefit the EIA process. It is necessary to note that discussion of theory is going to include aspects that may have not appeared in the case study directly, but nevertheless came up while preparing the case study.

Limitations

Several limitations to this study have affected the results discussed further. Even though the topic is very general and raises numerous interesting issues, it should be remembered that the author was limited in time and resources. Most limitations are related to trust research being heterogeneous and involving complex subtopics.

The choice to use surveys instead of interviews for the actors has affected results and may not have produced in-depth knowledge. It is recommended to use personal interviews in further research when only several actors are analysed.

One of the major limitations with trying to assess the perceived level of trustworthiness is that it may change over time. Asking actors now about what expectations they had towards other actors may not provide accurate results. Their expectations may have changed over time and there is also a possibility that it happened without them noticing. The interaction part of the project as such is now over, therefore the author is trying to look retrospectively and the findings may not be accurate.

All interactions were assessed only from the point of view of trustors (due to the theory). Analysing them both ways and addressing questions to trustees could provide more bases for what kind of interaction it was.

No quantification of trust was attempted since the methodology of that is very complex. Even though quantification is relevant to the research question, it was decided to leave it out of the scope of this study.

Levels of trust (interpersonal, impersonal (between organizations) and system) were not studied in detail, since only trust between organizations was chosen in the methodology. However, all levels came up in the study in one or another way.

Functional equivalents of trust such as power and distrust were not discussed in detail since they present topics in themselves. Thus not so much use was made of the table presented by Hardy et al. (1998) (see Theory).

Another problem with this research is that the project is lengthy and has undergone some adjustments (change in number of turbines, for example). Remote access to documents has not always worked perfectly well. For instance, the Environmental Court's Decision was uploaded on the Internet a while after it was taken, and actors were identified without it based on accessible documents then. Choice of actor to represent the general public could have been different, but a researcher is path-dependent and cannot step back to alter planning.

All these limitations are discussed in more details below.

Theory-related

In this study I have attempted to apply a cross-disciplinary view of trust to the case study of actor interaction within the EIA process in Sweden. Overall, it is possible to say that trust between the actors can be used as a framework for an analysis of interactions. Nevertheless there are certain difficulties arising in this respect.

Definition of trust

The first issues came up while trying to design a survey for the case study. First of all, there are different views on trust depending on the discipline that is trying to study it. There is still no agreement on the definition of trust, however, most researchers whose works were reviewed for this paper have agreed on common features of the concept (e. g. Lewicki et al., 2003; Rousseau et al., 1998; Shapiro, 1987). Unless further integration of view of trust follows, researchers using trust as a framework for analysis have to be careful to choose which view they decide to use. In this work it was assumed that impersonal trust between organizations is the one to be applied in this case. Impersonal meaning that actors are not individuals but organizations and trust in that case works differently (Shapiro, 1987, pp.625-626).

Measuring Trust

Another controversial issue related to trust is measuring it, which presents several obstacles: subjectivity, quantification and actor identification.

Trust is a subjective phenomenon; the level of it is such as a trustor perceives it to be. Assessment of risks, for example, can be done objectively by a researcher, but a trustor will not necessarily perceive them the same way. Even in case of using impersonal trust, which presupposes lack of emotional content (Shapiro, 1987), it cannot be denied that in certain interactions in this case study (developer-general public) a strong personal emotional element was affecting perception of interaction. It is logical to assume that research in trust levels would be carried out in order to improve them in practise. Recommendations for improvement should be based on objective facts. Therefore there is a need to distinguish between subjectivity and objectivity. Critical analysis is always needed.

There are actual formulas to measure trust (e.g. see Suttcliffe, 2006, p.8) depending on how trust is defined. The Sutcliffe's model that was used for analysis suggested the following elements of trust: risks, motivation to enter interaction, and power asymmetry, as well as reputation consisting of competence, benevolence, ethical integrity and predictability. Therefore those factors have to be quantified too. Not only are those factors hard to quantify,

but also the weight of each factor in consideration of each actor may be different. For example, some may favour competence against ethical integrity. As it was mentioned before, direct indication of trust is behaviour, but trust can be measured indirectly when opinions or perceptions are taken into account. Can subjective perception be quantified? If researchers are analysing trust from these standpoints, it does not mean that actual trustors use the very same definition of each concept. It means that when measuring certain aspects of basis for trust, it is necessary to communicate the researcher's definition to the public under consideration.

As for actor identification and analysis, when measuring trust within organizations, who exactly is to be chosen as a representative of the organization? In the cases of O2 Vindkompaniet and the Society Finnskogsriket it was probably the easiest. Most likely that project managers and chairmen have more information and are aware of the official position of the organization, but they are not the only persons who constitute the organization. Should only their level of trust be measured or should there be a significant sample from numerous employees and then average figures are to be determined? In that case there should be some reference point, because individual scales of trust level may not measure up.

Actor identification is especially difficult in case of the general public. The general public is very heterogeneous: individuals and NGOs. While NGOs that have the right to appeal in court have to be operating within environmental field, individuals can be people with different background, value systems, united only by the fact that they are living in the area of the planned project. That means that if trust is used as a framework for analysis of interaction between developer and general public, results may be very different and case-specific. In this case public opinion surveys about the project may be more relevant than finding out trust levels. Another problem is that trustee may not be willing to openly admit his or her position. Sometimes they may pursue opportunistic behaviour (see Trust and Power for reasons why), even though trust is expected of them by some other actors. Then they would be interested to create a façade of trust, thus questionnaires to determine presence and/or level of trust have to be designed carefully as to consider different aspects and avoid too obvious questions. The same goes for trustors, they may not be aware of the real situation. In this paper respondents were informed that surveys that they had to fill out had to do with trust, however maybe avoiding mentioning it could have led to different results.

Dynamics of Trust

Another major problem with measuring trust is that it is a dynamic process. It has its stages and levels may change over time depending on experience of cooperation. Since an EIA is a lengthy process and the opportunity to carry out surveys with the actors came up after the court decision, it is difficult to say whether it was the right time and whether the results are representative of the average trust level of the surveyed actors (the fact of appeal has certainly influenced perceptions). As a researcher dealing with trust, it is important to distinguish the specific purpose of research and then go from there at which moment trust should be assessed. Maybe it is viable to carry out several measurements and see the dynamics of trust or maybe it is impossible to identify the best moment since the environment cannot always be controlled by researchers. Constructing the framework for analysis based on the theory of trust takes time and the process progresses, thus the framework may become irrelevant during the process.

Also, analysis of risks for the trustors became somewhat retrospective. It is natural that risks can change depending on the situation, but analysing risks before entering into any kind of

interaction should not be assessed after the interaction. Real life situations cannot be analysed within labs and therefore such research needs to account for stochastic processes. In this case it was possible to measure whether there are objective prerequisites for trust-emergence such as potential sanctions and institutional arrangements or by checking subjective perceptions of the actors. It was attempted to do both. It cannot be denied that institutional arrangements such as, for example, transparency in the requirements of a CAB for the developer contribute to emergence of trust since it minimizes risks. There may also be other factors that influence perception. Even though we are dealing with trust between organizations, the interpersonal factor cannot be denied, it is present. Besides, the experience of interaction, even if indirect, influences perception (as compared to expectations prior to entering the interaction).

It is also not clear when trust starts. According to the continuum suggested by Marsh and Dibbon (2005) when the trust level is above zero, but below the cooperation threshold, it is untrust. However, then the question is when the cooperation threshold is reached. Actors may enter an interaction with formed opinions of each other and later those may be confirmed or contradicted. Inclination to trust, or existing trust, may receive additional support or evolve into a different kind (from calculus-based or deterrence-based to identification-based/relational) or dissolve due to certain kinds of behaviour. Every interaction between the actors shapes their relationship. All of this is to say that trust is dynamic and when measuring it at any given point that fact has to be taken into consideration.

For practical implications, however, being a dynamic process provides certain advantages: if there is no trust at a given point, it does not mean that trust cannot be built in the future. This research focused more on a general disposition between the actors to trust each other. Not only is trust dynamic, but interactions between the actors also have their dynamics. Is it necessary to indicate time limits of interactions in order for analysis to be more precise? The peculiarities of the EIA process also present difficulty in respect that some actors change between their roles. For example, CAB in the early stages of the process is a consultation party who determines significant impacts and gives advice on regulations to the developer. Later on they become a reviewer and decision-maker. Different roles may translate into different competences, but how does it affect trust? In both cases CAB is still a trustee, and the basis for trust is still, in the most part, legislation, so it is possible to conclude that there is not much difference in the eyes of the trustor despite the different roles of the trustee. Another complicating factor in the process was the court appeal. Not only did it shift the dynamics of interactions between the actors by bringing in a third party, the court (an intermediary and an extra actor) to the process, but it also created another dimension to the situation, systems trust (judicial system). Besides, the court decision must have influenced trust levels of the actors confirming that the developer did not care about their interests and used power, for example.

System Trust

This brings us to another point. Even though this paper was focusing on trust between actors or impersonal trust between organizations, a different kind of trust that was not even clearly mentioned in the theory part as it seemed unnecessary at that point, kept coming up: system or institutional trust. This kind of trust is also impersonal, but it is different from the kind that was emphasized in this paper (impersonal trust as interaction between organizations). As opposed to trusting/distrusting a particular actor, the agent may invest trust into the institution or the whole system, for instance, local authorities as an institution or government or democracy as a system. Lewis and Weigert (1985) define system trust as “functioning of bureaucratic sanctions and safeguards” and this definition sounds very much like what other

researchers call controls (for example, Schoorman et al., 2007) and classify as deterrence-based trust (this concept was used numerous times in this paper). In the case of Finnskogsriket it seems that their comment about "no point in dealing with developers" indicates not so much distrust towards O2 Vindkompaniet, but a more general distrust to the setup of the EIA process. Thus trust in such a concept as EIA can also be studied. Finnskogsriket also pointed out that EIA is a "false show" meaning they do not trust the process. During surveys carried out in this research it was determined that the purpose of EIA is perceived slightly differently between different actors. This is a problem since expectations of other actors' behaviour in this process may be influenced by the way they perceive the purpose of the process. It also underpins the difference in values of actors in the process: favouring economic benefits of the project over environmental concerns, for example. However, values are a subject of research in themselves and suggestion for further research in the field of EIA could include exploring system trust and value systems of the actors.

Reciprocity

Another theoretical problem that has not been well-developed in research is reciprocity. The EIA process is about cooperation between different actors (participative and transparency basic principles in IAIA's EIA best practice (1999)) and trust can also promote cooperation (Roussau, 1998, p.399). That presupposes that the process is reciprocal, which is emphasized in the model chosen for analysis. Trustor and trustee need each other to accomplish a common goal. They are dependent on each other, because their individual resources are not sufficient; however there is still power asymmetry. In the case study it was decided to analyse the process from the point of view of trustor, but choosing who is a trustor was not always easy.

It was decided to see the trustor as the one with less power resources, thus more dependent on another agent to complete the goal. In this view, some relations presented to be controversial. For example, in the case of developer-municipality, their roles can be perceived as shifting. Even though municipality is a consultation party and is a trustor most of the time, in the situation when the developer needed their approval, they could have vetoed the project. That meant power allocation was different and the developer could have been a trustor in that situation.

Schoorman et al. (2007) also argue that trust does not always have to be reciprocal. It can be that agent A trusts agent B, but B does not trust back. This paper did not examine two sides of the relationship, thus more research is needed in this area to develop the idea of reciprocity. Although in the relationship developer-general public, it looks like O2 Vindkompaniet is not inclined to trust Finnskogsriket and vice-a-verse. It is logical to assume that trust or distrust from another party can affect trust levels of the trustor. This is most obvious in a situation of breach of trust, which was not directly detected in this case.

Types of Trust

If we turn specifically to the results of the case study, we can point out if there is trust between actors and if so, what kind of trust it is (see Case Study). It was assumed that trust could improve the process of EIA since interaction based on trust could contribute to a more productive cooperation and save resources and time otherwise spent on the court appeal, which in my opinion could have been avoided, would trust have been the basis for interaction. That said the kind of trust appropriate for this process is **generated trust** (opposite to spontaneous (Hardy et al., 1998). This kind of trust is characterized by equal participation, a

win-win view and management of meaning, which is all presupposed in the EIA process: all consultation parties should equally contribute to the process (depending on their goal); most interests should be taken into account, so it is a compromise and a somewhat win-win situation; and the EIS should contain considerations of all interests that came up in common discussions.

As for a more common classification of **calculation-based trust (CBT)** or **identification-based trust (IBT)**, it is not very applicable in the given case. Naturally all the actors consider their risks and benefits. However, in most cases for the developer the only alternative to entering relations with most actors is not to enter relations at all. The developer has to get a permit from CAB and get approval from municipality. Theoretically, they can choose between several municipalities, but that is only possible if their projects can be carried out within several municipalities.

Identification-based or relational trust is not very probable by default since it is based on common values, attitudes and presupposes a long-term relationship. Usually actors upgrade to IBT from CBT. It can be said that IBT is possible within system trust, which calls for better transparency. If we say that the government and each of its institutions respects and protects interests of the citizens, values certain things and if those things coincide with those of citizens than the interaction with governmental institutions such as, for example, CAB or municipality could be somewhat close to IBT. However, individuals and organizations or business are not the same entities, and this is a very general assumption.

Deterrence-based trust was mentioned many times due to the nature of the EIA process: it has to do with rules and regulations. All of the possible interactions are based on legislation, which provides a framework for understanding individual roles and tasks and how to build relations. On one hand, such regulations save the agent's need to assess competence since certain rules ensure quality level of procedures. They may also enhance predictability of behaviour and benevolence (for example, the CAB will issue a permit if all the requirements for the EIA are met). In some cases regulations can be indicators of ethical integrity in a way. For example, the fact that a developer has to consult with the general public should mean that they value different opinions and try to make sure the consequences of their project are as minimally harmful as possible. Whether it is so is another question.

Another aspect of a control system is that it balances power asymmetry. While a developer may go ahead and pursue opportunistic behaviour with having provided evidence for consultation with the general public and not adapt the project according to their interests, there is a chance for certain parties to appeal the decision about the permit in the court and potentially make the developer change the project. On the other hand, the problem with control systems is that according to some researchers the trustee's actions may be interpreted not as based on their benevolence or integrity, but as a response to control systems (Strickland, 1958 cited in Schoorman et al., 2007). This theoretical aspect requires more research and empirical data. According to the definition and the model adopted for analysis in this paper it is not very clear if such a mode of interaction can be labelled as trust.

Trust or Not (as applied to the case study)

In the case study of the chosen interactions (developer-CAB, developer-municipality, developer-general public and consultation party (municipality)-consultation party (general public)) different trust levels were identified, but since no quantification was applied and the

analysis was rather general, all the results should be viewed as approximate. In the first case all prerequisites for trust are present, both according to analysis of institutional arrangements and the survey. It was a clear example of deterrence-based trust and facades of trust seem irrelevant in this interaction.

The second interaction proved to be controversial. While RA showed indications of trust towards the developer, EPBC clearly was leaning towards distrust. If treating Municipality as one entity, it is logical to assume that trust has been misplaced, thus, it should be qualified as mistrust. Without detailed analysis of the EIA process and consideration of the court appeal such a conclusion seems viable. However, dynamics within the Municipality show that there is a conflict of interests and most likely both parties will remain of the same opinion: RA will consider the project necessary and investor's actions as adequate and trustworthy while EPBC sees the project as too disturbing and investor's intentions as malevolent. Research on trust used for the analysis of this case does not seem to address such dynamics within organizations. Since most research on trust between organizations usually comes from organizational/managerial studies it does not seem to be relevant in the governmental sector with its peculiarities. Usually organizations have a unified code of conduct and deal with internal conflicts of interests better.

The interaction between the developer and the general public seems to be the most problematic within the EIA process. Although, the actor chosen to represent general public may not be the best choice, but it can be classified as the general public with acceptable results for analysis. In this interaction the potential trustor clearly shows distrust towards the trustee. Within this interaction theoretical concepts of trust between organizations and systems trust significantly overlap, but since systems trust was not a focus of research it is impossible to comment on the overlapping further. Also since the interaction was analysed only from the point of view of the trustor, no facades of trust have been established, although one is able to see the possibilities for the developer to be interested in creating one precisely in this interaction. Identifying a façade of trust requires a separate survey.

The interaction between the consultation parties during the EIA process hardly exists. It was examined as a potential interaction and it was indirectly (through comments from the actors) established that there is no base for trust between existing actors. In theory since the process of EIA does not presuppose this interaction, but there may be common goals for some actors, potential interaction could be characterized by untrust: very low level of trust that is not enough for cooperation.

All actors chosen for analysis come from different sectors: the developer represents business, municipality and CAB are governmental authorities, and general public was represented by an NGO, although it can also be represented by individual citizens. Trust dynamics between different sectors seems to be different from when actors are interacting within one sector, since they may be more familiar with organizational arrangements in that case. Therefore, this factor should also be considered when designing the analysis framework.

It seems that an attempt to analyse several sets of interactions only proved that each interaction needs to be studied in detail in order to receive more definite results. First of all, carrying out quantitative research could be helpful to make more definite conclusions about the mode of interaction. Secondly, if the interaction turns out not to be based on trust it might be necessary to identify what exactly it is based on. Once trust has been disregarded as an option, further surveys and measurements might be necessary for more specific answers.

While considering other basis for interaction and, for example, considering power, is it developing trust theory further or is it going into another domain? As it was showed above, some researchers (Hardy et al., 1998) have integrated the concept of power into trust; however, there are plenty who focus only on power.

Cross-disciplinarily or interdisciplinary

Thus far, the speculations about theory and its applicability have been rather abstract and general. This was partly because of the peculiarities of the case study and decision to analyse several interactions of different sort. However, there are major difficulties with applying the theory for other reasons: trust research has not produced one theory agreed upon by everyone, but rather exists somewhat separately. At times there are different researchers talking about similar things with different names (for example, IBT and relational trust or calculus-based trust and calculation-based trust). It has been attempted to apply a cross-disciplinary view of trust in this work, however, despite common features of the trust process recognized by different disciplines, there is a strong need for integration into a single theory and development of already existing aspects. The call for interdisciplinary is also relevant since this research has proven there are multiple aspects of the trust process that are interconnected and should be better regarded from a systems thinking point of view.

Application of different aspects of trust to the case of an EIA process in Sweden has showed that trust as a framework can be applied, however not in the current form. It may produce more fruitful results if a researcher sticks to one discipline, therefore a more specific framework for analysis may be drawn up. On the other hand, a point of view from only one discipline may produce limited results and ignore other aspects that may be necessary for practical consideration. Research within trust still has a long way to go and should include more empirical research.

Practical implications

Even though not a direct subject of this research, some practical problems in relation to the case study with the process came up and deserve to be briefly mentioned since they can serve as a subject for further research.

Too Many Actors

Besides the process of EIA being very time- and resource-consuming, it involves too many actors (see Table 2). At the stage of actor identification for the case study it was established that there are only several important ones, but overall the number of actors can be overwhelming. The main responsibility for carrying out the process is that of a developer. On the other hand, it can be assumed that the process can be simplified somehow so that the developer can concentrate on the EIS and addressing conflict of interests. Even Swedish Energy Agency admits that. In their goals for 2020 (to reach production of 30TWh from wind power) they talk about the necessity to speed up the process and create a so called “one-stop-shop” so that a developer can contact all the governmental authorities in concern at one place (Swedish Energy Agency, 2011). Certain steps in this direction are already being taken and there is a project organized by 20 governmental agencies for wind power projects, Vindlov.se, in order to provide unified information to the developer. Instead of contacting each individual

authority, they can access all the necessary requirements and procedures at one web-site. This contributes to a better information exchange and reduces complexity in interactions.

Internal Conflicts of Interest

Another practical implication that was discovered in this case is the conflict of interests within institutions. In this case the Municipality of Bollnäs was not united about their support for the project even thought this actor is supposed to act unanimously. Conflict of interest within organization is probably an indication of trust issues and is something to be addressed, not only for the sake of operation of the municipality, but also for improving the process and quality of EIA. The problem has to be further explored to find out what reasons lay behind such a situation and how it can be improved. For the EIA process it is necessary that one actor, especially as significant as municipality, should stand united behind their decision.

Problems with the general public: definition and involvement

Regarding the general public, there is an obvious problem with the definition of "concerned public". Relevant laws give a very broad definition. Besides, the requirements imposed by the Environmental Code for an NGO to have the right to appeal a permit decision in court, seriously limit power resources of some actors. In case of the Society Finsskogsriket, they could express their opinion for the developer, but had no right to appeal in court, which they were not aware of. Either they should not have expressed their opinion in the first place, or should have had the right to appeal. Such unclarity contributes to distrust in the existing institutional arrangements. It is suggested that the definition of "concerned public" should be adjusted or actors should be better informed about their rights in the EIA process according to laws.

Overall, the interaction developer-general public, specifically developer-NGO proved to be the most problematic in terms of trust levels. It is no wonder that legislation about involving the general public in the process has become stricter since power asymmetry between these two actors is great. On the other hand, such control systems may only be damaging initial perception of the interaction. Developers have to consult with the general public, not because they deliberately want to do so, but because they are required. Glasson et al. (2005, p. 158) point out that most developers do not favour public participation, because diverse groups have different interests that may not coincide and thus will not lead to a conclusive decision. Besides it takes up time and money. Somehow developer's perception of consultation with the general public should switch from bureaucratic formality to valuable feedback in the process. Control systems such as legislation initiate the involvement of the general public, but limit possibilities for trust-building in a way. Otherwise, developers may be interested only in creating facades of trust.

Improving Trust Levels

A general recommendation for improving trust levels would be to determine the existing trust level and see what the obstacles for trust-building are. Naturally, trust-building would be very case-specific, but there are common features of the process. In that light it can be said that more transparency and better information exchange can contribute to a better risk assessment and predictability of behaviour of other actors. Thus, if there can be trust, it will be easier to establish. Another improvement can be making sure that all the actors involved in the process understand the purpose of an EIA similarly. Creation of common values could be helpful too.

Still all of these recommendations are very general and should have a better basis under them, thus more research is needed.

Conclusion

The attempt to apply trust as a framework for analysis to the given case study brought up numerous issues for consideration. Due to a general nature of this research, namely, the attempt to cover several interactions only from the point of trustor, the adopted framework for analysis proved not to be very practical, unless it undergoes a more thorough design.

It has been established that the conceptual framework requires serious consideration of how to measure and classify trust and address the issue of reciprocity. Measuring includes problems that can be further subdivided into the following categories: quantification of trust (how exactly should it be measured), establishing relevant point(s) of analysis in time (since it is as a dynamic phenomenon) and, in case of organizations, actor identification and choice of samples (who represents an organization). Even though trust is subjective and may be initiated by one actor, it is a reciprocal process and thus relationships should be assessed both ways: from the point of view of trustee and trustor. Another theoretical aspect that has not been sufficiently developed in this study is the alternative scenarios to trust: what is the mode of interaction if it is not based on trust. Such concepts as distrust, untrust and mistrust can be very valuable in terms of assessment of interaction as wells as they can also contribute to practical improvement of trust levels, should there be more theoretical and empirical information available about them. More research on power in connection with trust is also needed.

Theoretical application to a particular case study also demonstrated the need for a more detailed analysis of each interaction since they are all of a different nature: business, government or NGO. Both way trust analysis of only two given actors may result in more profound conclusions and practical recommendations.

Overall it was concluded that trust research seems to be discipline-specific and there is a call for more cross- or inter-disciplinarily (depending on the aim of research). Applying framework from one discipline to another may be difficult and more unification of theory is needed because of that.

Interest in trust research comes from practical implications. Knowing mechanisms of trust-building, it may be possible to improve or restore trust in certain situations. Relationships based on trust can lead to a better performance by saving time and resources needed for risk assessment and adapting behavioural strategy.

Empirical evidence from the case study of the Tönsen Wind power Park showed that there is significant problem within the interaction between the developer and the general public (or NGOs as representatives of general public). First of all, there is a problem with the definition of “concerned public”, those who have the right to take part in the EIA process and secondly trust levels seem to be minimal. However, it seems to be a problem of system trust, not just this particular interaction. All these problems have to be addressed in order to improve the EIA process and outcome.

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Appendix

1. Survey questions

O2 Vindkompaniet (the developer):

Questions regarding the project (just to clarify information):

- **När började projektet?**
  When was the project started?
- **Vem genomförde MKB:n och hur kan man få tillträde till den?**
  Who did EIA for the project and how can it be accessed?
- **Vad finns det för förhållande till Bergvik Skog AB?**
  What is the relationship with Bergvik Skog AB?
- **Beslutet om tillstånd överklagades. Hade ni förväntat er det? Vad tycker ni om mark- och miljödomstolens beslut?**
  The decision to grant permit for the project was appealed in court, did you expect that and what is your opinion about the court's decision?

1. **Hur uppskattade ni era chanser av att få tillståndet?**
   How would/did you estimate your chances of getting the permit?

Mycket osannolik	Något sannolik	Mycket sannolik

2. **Ranka hur viktig interaktion med de nedstående aktörerna är (0-inte viktig, 3 – mycket viktig):**
   Rate the importance of interactions with the following actors:

Länsstyrelse	0	1	2	3
Kommun	0	1	2	3
Allmänheten	0	1	2	3

3. **Har ni någon tidigare erfaranhet av interaktion (t.ex. genom andra projekt) med nedanstående aktörer? Om ja, vilken typ av erfarenhet och när anskaffades den:**
   Do you have a previous experience of cooperating/interacting (e. g. other projects) with any of the following actors?

Gävleborgs Länsstyrelse	Ja	Nej
Bollnäs Kommun	Ja	Nej
Föreningen Finnskogsriket	Ja	Nej

4. **Visste ni hur de nedanstående aktörerna skulle förhålla sig i relation till era mål med projektet (exempelvis samarbetsvilja/motvilja)?**
   Did you know what kind of behavior in relation to your project to expect from the following actors (e.g. will they help you to reach your goal with them)?

Länsstyrelse	Nej	Ungefärlig uppfattning	Ja
Kommun	Nej	Ungefärlig uppfattning	Ja

5. **Vad anser ni vara målet med MKB?**
   What is the goal of EIA process in general?

6. **Vilka är fördelarna med Tönsen projektet?**
   What are the benefits of Tönsen project?

7. **Vilka är nackdelarna med Tönsen projektet?**
   What are the negative aspects of Tönsen project?

8. **Fick ni tillräcklig information från nedstående aktörerna?**
   Did you receive sufficient information from the following actors?

Gävleborgs Länsstyrelse	Ja	Nej
Bollnäs Kommun	Ja	Nej
Föreningen Finnskogsriket	Ja	Nej

Kommentarer:
Comments.

Bollnäs Municipality (consultation party):

Questions regarding the project (just to clarify information):

- **Vad tyckte ni om projektet?**
  What was municipality's opinion of the project?

- **Fanns det intressekonflikt inom kommunen (fullmäktige, miljö och byggnämnde)?**
  Was there a conflict of interests within the municipality (fullmäktige, miljö och byggnämnde)?

1. **Hur uppskatade ni möjligheter att era projektsintressen hade tagits i beräkningen:**
   How would/did you estimate the chances of ensuring your interests with the project were taken into account?

Mycket osannolik	Något sannolik	Mycket sannolik

2. **Ranka hur viktig interaktion med de nedstående aktörerna är (0-inte viktig, 3 – mycket viktig):**

Rate the importance of interactions with the following actors:

O2 Vindkompaniet	0	1	2	3
Allmänhet (ink. Föreningen Finnskogsriket)	0	1	2	3

3. **Har ni någon tidigare erfaranhet av interaktion (t.ex. genom andra projekt) med nedanstående aktörer? Om ja, vilken typ av erfarenhet och när anskaffades den:**
   Do you have a previous experience of cooperating/interacting (e.g. other projects) with any of the following actors?

O2 Vindkompaniet	Ja	Nej
Föreningen Finnskogsriket	Ja	Nej

4. **Visste ni hur nedstående aktörer skulle förhålla sig i relation till era mål med projektet (t.ex. om de kommer ta med era intressen i beräkningen)?**
   Do you know what kind of behavior in relation to your project to expect from the following actor (e.g. will they take your interests into account)?

O2 Vindkompaniet	Nej	Ungefärlig uppfattning	Ja

5. **Vad anser ni vara målet med MKB?**
   In your point of view what is the goal of EIA process in general?

6. **Vilka är fördelarna med Tönsen projektet?**
   What are the benefits of the Tönsen project?

7. **Vilka är nackdelarna med Tönsen projektet?**
   What are the negative aspects of the Tönsen project?

8. **Fick ni tillräcklig information från nedstående aktörerna?**
   Did you receive sufficient information about the project from the following actors?

O2 Vindkompaniet	Ja	Nej
Föreningen Finnskogsriket	Ja	Nej

Kommentarer:
Comments:

Föreningen Finnskogsriket (general public):

Questions regarding the project (just to clarify information):

- **Hur många medlemmar har Föreningen?**
- **Kännde ni andra klagande innan överklagandet (Bollnäs Kommun Miljö- och Byggnämnden, Gävleborgs Läns Ornitologiska Förening, Naturskyddsföreningen Hanebo)?**
- **Om ja på ovanstående frågan, förklara**
- **Visste ni om en ideel förenings rätt att överklaga enligt Miljöbalken (Ch. 16 §13)?**
- **Har ni ytterligare planer för det här projektet?**

1. **Hur uppskatade ni möjligheter att era projektsintressen hade tagits i beräkningen :**
   How would/did you estimate the chances of ensuring your interests with the project were taken into account?

Mycket osannoligt	Något sannolik	Mycket sannoligt

2. **Ranka hur viktig interaktion med nedstående aktörerna är (0-inte viktig, 3 – mycket viktig)::**
   Rate the importance of interactions with the following actors (0-not important, 3 – very important):

O2 Vindkompaniet	0	1	2	3
Bollnäs Kommun	0	1	2	3

3. **Har ni någon tidigare erfaranhet av interaktion (innan projektet) med nedstående aktörerna? Om ja, vilken typ av erfarenhet och när anskaffades den:**
   Do you have a previous experience of cooperating/interacting (e. g. other projects) with any of the following actors? If yes, please specify when and how:

O2 Vindkompaniet	Ja	Nej
Bollnäs Kommun	Ja	Nej

4. **Visste ni hur nedstående aktörerna skulle framhålla sig i relation till era mål med projektet (t.ex. ska de ta era intressen i beräkningen/samarbeta/ motarbeta)?**
   Did you know what kind of behavior in relation to your goals with the project to expect from the following actors (e.g. will they take your interests into account/cooperate/oppose you)?

O2 Vindkompaniet	Nej	Ungefärlig uppfattning	Ja
Bollnäs Kommun	Nej	Ungefärlig uppfattning	Ja

5. **Vad anser ni vara målet med MKB?**
   What is the goal of EIA process in general?

6. **Vilka är fördelarna med Tönsen projektet?**
   What are the benefits of Tönsen project?

7. **Vilka är nackdelarna med Tönsen projektet?**
   What are the negative aspects of Tönsen project?

8. **Fick ni tillräcklig information från nedstående aktörerna?**
   Did you receive sufficient information from the following actors?

O2 Vindkompaniet	Ja	Nej
Bollnäs Kommun	Ja	Nej

Kommentarer:
Comments.