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**Article**

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# Expected benefits and drawbacks of Baltic Sea European transport corridors—Implications for complementary governance of TEN-T Core network corridors

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**Abstract:** In this paper, stakeholders' expected benefits and concerns are presented regarding the development of Core Network Corridors (CNCs) within the European transport initiative, the Trans-European Network for Transports. An interview study was conducted with 23 stakeholders from different parts of the society in the Baltic Sea area. The results show that stakeholders have a range of expectations, both positive and negative, for the development of the CNC. Stakeholders' views were sorted into three categories based on the gathered data: matters that are already regulated; unregulated matters that often include vaguely defined responsibilities and require diverse stakeholder engagement for improvement; and matters for which there are concerns about negative outcomes. The results indicate (a) a need for cost-effective complementary governance, here described as additional governance measures to those regulated in the initial framework, (b) that a wider group of stakeholders than is currently involved is needed in the on-going implementation process. Additional regional and local level stakeholders, within and outside of the CNC, and private businesses, would enhance the benefits and/or mitigate negative

## ABOUT THE AUTHORS

Maria Öberg, Kristina L. Nilsson and Charlotta M. Johansson are all affiliated to the Architecture research group at Luleå University of Technology. Architecture is here seen as design, technique and management of spatial organisation of various scales, it includes building, urban and transport planning. In the field of transport planning, the authors' interests cover governance of long-distance transport corridors, as well as both motorised and non-motorised transports, in an urban and rural perspective. The diverse scales and combinations of transport should all contribute to an economic, ecologically and socially sustainable development in society. The research presented in this paper is part of a larger research project aiming to clarify the utility, and if so design, of complementary governance in the implementation process of the major European transport corridors, Core network corridors, in the Trans-European Network for Transport (TEN-T). Complementary governance should support and enhance positive outcomes of the initiative.

## PUBLIC INTEREST STATEMENT

The main aim of the Trans-European Network for Transports (TEN-T) is to support European cohesion and a single European transport area with smooth passenger and freight transport. Currently, major European transport corridors (TEN-T Core Network Corridors) are being implemented as strategic parts of the TEN-T. These transport corridors include rail, road, air and water transports. An interview study was carried out in the Baltic Sea region, where results from the interview topics of awareness, and expected benefits, of these corridors are presented in this paper. The 23 interviewees were affiliated to public authorities, infrastructure organisation/companies, private companies and other organisations. The results show both expected benefits and drawbacks with the corridors. Related to these views, the need of complementary governance in the process is discussed. Such complementary governance should support sustainable development and stakeholders' ability to gain benefits of the corridors.

implications of the developed CNCs, (c) an openness for complementary governance in the on-going CNC implementation process. This openness needs to be considered when developing models for policy packaging.

**Subjects: Governance; Transport Planning; Sustainable Development**

**Keywords: transport corridor; core network corridors; TEN-T; governance; interview study; policy-packaging**

## 1. Introduction

Development of the trans-European network for transport (TEN-T) represents a strategic initiative in EU infrastructure policy that aims to improve the cohesion, efficiency and sustainability of transport, as well as provide increased benefits to the users (Regulation (EU) No. 1315/2013, 2013). The TEN-T policy includes rail, road, sea and air infrastructure, and concerns both passenger and freight transport (Regulation (EU) No. 1315/2013, 2013). Nine Core Network Corridors (CNCs), representing the most strategic transport corridors, were selected to be at the forefront of the development (Regulation (EU) No. 1315/2013, 2013). To implement these CNCs a governance structure was outlined in the regulation, including a coordinator appointed by the European Commission for each corridor, corridor forums as a consultative meeting place for invited stakeholders, and a work plan for each corridor. The work plans describe measures for desired development. However, since the CNCs are a rather new policy tool, the stakeholder effects, opportunities and responsibilities remain somewhat unclear.

With the broad scope of the TEN-T initiative (i.e. several transport modes, across countries), many stakeholders will be affected. The number of stakeholders included in Corridor forums has increased throughout the implementation process and currently includes governmental and EU representatives, infrastructure managers (rail, seaports, roads and airports), regional authorities and representatives from large cross-border projects and other geographically overlapping initiatives (European Commission, 2014). The Corridor Forums focus on stakeholders that are geographically situated within the corridor. However, in the on-going process there is an intention of reaching more stakeholders, and new forms of collaboration are of interest (European Commission, 2014). For example, the Scandinavian–Mediterranean (ScanMed) coordinator launched idea labs to bring stakeholders together for discussion and innovation in relation to the CNC development (European Commission, 2015). These idea labs are based on specific topics or geographical areas.

In parallel with the TEN-T implementation, the TENTacle project was introduced and approved as a regionally driven EU Interreg Baltic Sea area project to be implemented during 2016–2019. Project partners from nine countries are in this project focusing on strengthening the stakeholders' capacity to benefit from the CNC development (TENTacle Project, 2017). The TENTacle project covers all three CNCs in the Baltic Sea area.

Given the number and diversity of affected stakeholders, it is unclear how stakeholder participation in the on-going CNC implementation process will develop, and thereby support, desired outcomes. Myint (2003) has shown that the participation of stakeholders from different layers of governance and parts of society is crucial in a top-down driven policy implementation process. Moreover, a study of the governance arrangements for future transport planning in the Leeds city region identified the securing of stakeholder support as crucial for both the planning and implementation phases (English & Spear, 2009).

Even though a governance framework for CNC implementation was established in the (EU) Regulation 1315/2013 (i.e. corridor coordinators, corridor forums and work plans), this framework still requires practical interpretation. Such practical interpretation can reveal a need for complementary governance measures. In this article, the term complementary measure is used to describe any additional measures to those regulated in the initial framework (Regulation (EU) No. 1315/2013,

2013). A combination and coordination of several policy measures, initial and complementary, to achieve intended outcomes is the basis for the theory of policy packaging (Givoni, 2014).

The research presented in this paper aims to clarify stakeholders' views of the expected benefits and drawbacks of developed CNCs. The views were then examined to provide information about the need for complementary governance measures, as well as the design of such measures, that will enable the stakeholders to benefit from the implementation of CNCs. From a theoretical perspective, the results support stakeholder involvement in the on-going implementation of an initiative, and this point needs to be considered when developing models for policy packaging.

## 2. Method

The presented research adopted a qualitative approach. Strauss and Corbin (1998) recognise that qualitative research is appropriate for attaining extended knowledge of concepts, opinions and ideas, especially when they concern dynamic and complex human matters. Interviews were conducted with representatives from both the private and public sectors of Baltic Sea countries to gather information about the stakeholders' views (Merriam, 2014). The interviewees were geographically related to one or more of the three Core network corridors that run through the Baltic Sea area (the Scandinavian–Mediterranean, North Sea–Baltic and Baltic–Adriatic corridors).

The interviewees were chosen through a process that is integrated with the TENTacle project. In the TENTacle project, cases were formed that correspond to the geographical types: corridor node and transit areas; corridor catchment areas; and corridor void areas. Activities in these cases aim to benefit from the development of CNCs. Eight TENTacle case leaders were asked to suggest names of possible interviewees who are active in their geographical or macro-regional area and work in any of the four stakeholder categories: Public authority (government, regional/local authority, national transport agency); Infrastructure organisation/company (port, airport, railway, road); Private company; Other organisation (interest organisation or similar).

A total of 21 interviews were conducted with 23 persons. In two of the interviews, the interviewee asked to include a second person from their organisation, and this request was granted. This number of interviews was considered to be both sufficient enough to cover a wide range of views and practically manageable within the project's timeframe. The interviewees were distributed across the four categories (see Table 1), and geographically located in the Baltic Sea area including Norway. The interviews were conducted by telephone and audio-taped during September–October 2016. English or Scandinavian languages were used. The interviewees were asked to express their personal opinions rather than those of their organisation. This was done to gain a deeper understanding of the interviewees' views (instead of hearing a formal organisational statement), and to more easily be able to ask the interviewees follow-up questions.

A semi-structured interview guide served as a basis for the interviews. This interview guide was developed based on the results from a survey on the topic of complementary governance conducted during December 2015–January 2016 with participants from the Scandinavian–Mediterranean Corridor forum (Öberg, 2016). The semi-structured interview guide contained several topics: awareness of the TEN-T and the CNC development, expected benefits of a developed CNC, current involvement in activities relating to CNC implementation, views on future involvement and perception of

**Table 1. Interviewees in terms of employment category**

| Interviewee employment category | Interviewees |
|---|---|
| Public authority | 5 |
| Infrastructure organisation/company | 8 |
| Private company | 4 |
| Other organisation | 6 |
| Total | 23 |

what sustainable development means. Results from the interview study regarding awareness of CNC development, as well as expected benefits and drawbacks, are analysed and presented in this paper. These results are based on answers to two of the questions from the semi-structured interview study: How much were you aware of the development of the European TEN-T and the Core network corridors before this interview?; For your organisation/company, what do you think would be the greatest benefits of a developed corridor (which corridor depending on the interviewees' geography)? Although the interview question focused on benefits, the interviewees also provided expectations of drawbacks.

The audio-taped interviews were transcribed, and a content analysis was performed to systematise and interpret the text (Graneheim & Lundman, 2004; Krippendorff, 2004). Categorisation of the data is fundamental to the analysis process (Graneheim & Lundman, 2004; Mayring, 2000). A qualitative data analysis program, NVIVO Pro Version 11.4.1.1064 (QSR International, Melbourne, Australia), was used to organise the text material. As a first step, sentences or paragraphs regarding answers and comments to the questions posed in the semi-structured interview guide were coded in so-called *meaning units*. The main content of the meaning units was then abstracted and categorised into a range of answers to the actual question. This statement from an interviewee regarding accessibility to cities is an example of such a meaning unit; *It makes it easier for us to reach our political goals regarding working with the county's accessibility. Good connections to the larger cities Stockholm, Oslo and Gothenburg is our task (translated from Swedish by the corresponding author)*. This meaning unit was abstracted and categorised into *better connection to big cities*. In Figure 1, all categorisations are presented as a summary of expectations, thus *connection to cities* is presented as an expected benefit. The interviewees' views and comments related to each categorisation are further described in Section 4. The range of answers was not pre-identified, but rather emerged as a result of the analysis process.

Preliminary results from the interview study were presented and discussed at the first TENTacle project Advisory Board meeting in Stockholm on the 8th of November 2016. The Advisory board consists of approximately 15 political representatives and policy advisors from the Baltic Sea area. In addition, 22 TENTacle project representatives attended the meeting. From a research perspective, this event was not just a way to distribute and discuss the results, but also an opportunity to increase the trustworthiness of the study by receiving feedback from additional stakeholders beside the group of interviewees, but similar to the stakeholders that had been interviewed (Connelly, 2016).

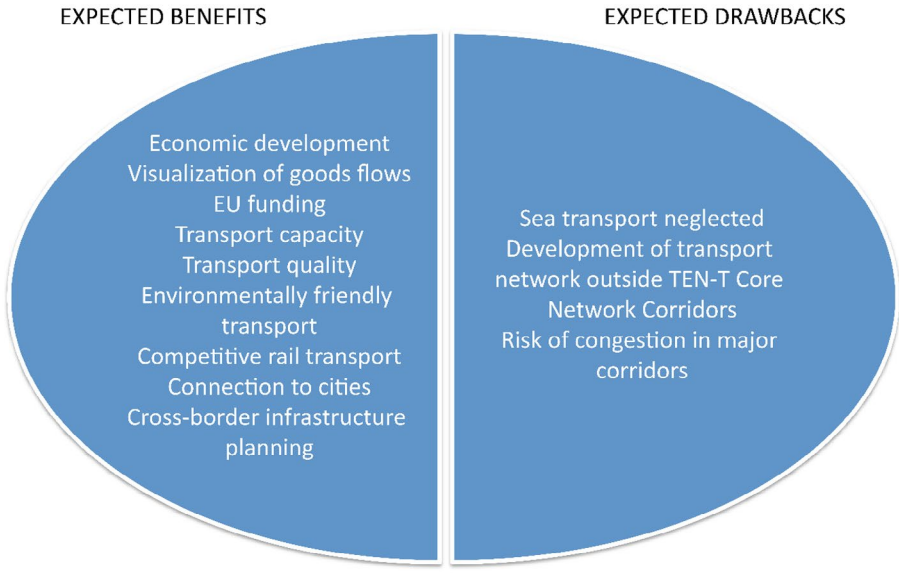


**Figure 1. Summary of the expected benefits and drawbacks of the developed CNCs.**

## 3. Theoretical perspective

This research focuses on the need of complementary governance to involve stakeholders in the CNC implementation, and thereby increase their benefit from it. In this article, the definition of a stakeholder corresponds to the categorisation by Le Pira, Ignaccolo, Inturri, Pluchino, and Rapisarda (2016), who separated actors involved in transport planning into three groups: experts; stakeholders (i.e. authorities, transport administrative agencies, interest organisations); and citizens. Stakeholders' expectations of benefits and drawbacks of the TEN-T CNC policy initiative are an important source of information. These expectations provide insight into how stakeholders who are supposed to benefit from the policy consider the initiative, as well indicate necessary directional adjustments. Systematic approach to collect stakeholders' views is acknowledged as a part of the model for stakeholder engagement presented by Cascetta, Cartenì, Pagliara, and Montanino (2015). This model consists of five steps: stakeholder identification, information gathering from the stakeholders, disseminate information from the project/initiative, consultation of selected stakeholders and possible participation in implementation. Stakeholder engagement is central to have a transparent decision-making process, gain support from the stakeholders (Cascetta et al., 2015) and strengthen possibilities for beneficial outcomes for the stakeholders.

Interviewing stakeholders is common in many scientific fields when a qualitative research approach is used. Stakeholders' views are gathered and related to the research topic. In an Australian case study, Simpson, Brown, Peterson, and Johnstone (2016) identified stakeholders' perceptions of coastal zone management and perspectives of the areas values. The results showed possibilities to affect the coastal governance with a pluralistic approach, to encompass diverse stakeholder values of the area (Simpson et al., 2016). Parent (2016) studied stakeholder perceptions of performance, accountability, transparency and stakeholder participation in three major sport events as an input for how to govern such events. The spatial (geographically close and in peripheral zones) and temporal involvement of diverse stakeholder opinions has been argued to be important in gaining acceptance for the development of large seaport infrastructures (Dooms, Verbeke, & Haezendonck, 2013).

Decision-making in transport planning is a process containing both a rational technical-economic part, but also a social part where stakeholders consensus is desired (Cascetta et al., 2015). A continuous stakeholder participation in the TEN-T larger projects is recommended in a report from the European Parliament, to solve problems at an early stage, and avoid discontented stakeholder groups in a later stage (European Parliament, 2013). The large infrastructure projects are possibly the most visible parts of TEN-T, but the TEN-T initiative encompasses more than infrastructure, such as telematics, efficient management and use of the infrastructure (Regulation (EU) No. 1315/2013, 2013, p. 6). Achieving a well-functioning transport system is a complex task where many stakeholders are engaged. For the TEN-T Core network corridors, the idea labs is an activity that encourages stakeholder involvement for exchange of information and innovation in selected topics. Another example in European policy, gathering public and private stakeholders in partnerships is the European innovation partnerships (EIP) introduced as a strategic approach connected to the EU 2020 strategy, aiming to support EU research and innovation (Russo, Rindone, & Panuccio, 2016).

In the presented research, stakeholder expectations were gathered and analysed related to implications on governance and stakeholder participation. Awareness of the TEN-T CNC policy initiative among stakeholders was also examined since this was considered to be a precondition for being able to express expectations of policy outcomes. Stakeholder participation is, to a large extent, controlled through governance structures and processes. Governance is a term that describes how processes are steered by concerned actors to achieve a certain outcome (Bache & Flinders, 2005; Gudmundsson, Hall, Marsden, & Zietsman, 2016; Pierre & Peters, 2000). Governance, and thereby stakeholder involvement, can be designed in many ways. Rowe and Frewer (2005) describe stakeholder engagement processes as information flows that can be divided into communication, consultation and participation. All three representing different ways to exchange information where communication represent information to the public, consultation represents information from the

public and participation represents an exchange of information in a dialogue (Rowe & Frewer, 2005). Design of processes for stakeholder involvement is a key to accomplish a desired and relevant impact on policies, plans or projects (Bickerstaff, Tolley, & Walzer, 2002).

Governance that includes extended cooperation in policy implementation, with more stakeholders involved, has developed during the last decades (Ansell & Gash, 2008; Emerson, Nabatchi, & Balogh, 2012). These aspects of governance are recognised as well in transport policy, planning and investment processes (Giuliano, 2007; Romein, Jacob Trip, & de Vries, 2003). Stakeholder inclusion also involves the democratic perspective, which is concerned with who is allowed to participate in the decision-making. Stakeholder inclusion is considered to be a part of *good governance*. This concept can be explained in many ways, but Agere (2000) pinpoints the most common elements as "accountability, transparency, combating corruption, participatory governance and enabling legal/judicial framework" (p. 7). Gudmundsson et al. (2016) summarised three important components of governance. First, the juridical and practice-based component that establishes what can be done, and how that is interpreted and managed in practice. The second component is the stakeholders that influence outcomes and activities, and the third comprises the policies and programs that have been outlined to direct activities towards overall objectives.

Any policy measure being realised affects stakeholders. The outcomes can be positive or negative or both, and outcomes are sometimes unintended, which can also be positive or negative (Givoni, Macmillen, Banister, & Feitelson, 2013; Justen, Fearnley, Givoni, & Macmillen, 2014). Insights into how policy measures affect specific stakeholders can motivate the development of additional measures that will enhance outcomes or mitigate negative effects. Combining several policy measures to achieve a certain outcome is also known as policy packaging (Justen et al., 2014). The effectiveness of combining primary measures with supporting ancillary measures describes the overall efficiency of the policy package (Givoni, 2014).

The theory of policy packaging, in this research, has been used to reflect the interaction between primary and complementary governance measures. While describing the iterative process of policy packaging, Justen et al. (2014) mention that gathering additional knowledge may be necessary to assess the measures, and state "the extent to which structurally-open methods (e.g. focus groups and expert workshops) may also be required has to be determined" (p. 12). In the case that a policy package is adjusted, it is most probable that the ancillary measures will be adjusted because the primary measures are still likely to directly affect policy objectives (Justen et al., 2014). In this paper, complementary governance is considered to be equivalent to ancillary measures.

## 4. Results

Results from the interview study are presented in Section 4.1, and in Section 4.2 comments from Baltic Sea stakeholders (politicians, policy advisors, TENTacle project partners) who were shown the results are presented.

### *4.1. Interviews*

The views and opinions identified from the interviews show both positive anticipation and certain concerns regarding the outcomes of the CNC development.

#### *4.1.1. Interviewee awareness*

The interviewees needed to be aware that TEN-T and the Core network corridors are ongoing EU initiatives to have expectations for their development and implementation. For this reason, awareness of TEN-T and core network corridor development was the first topic of the interviews. All of the interviewees were aware of the TEN-T development process. In some cases, interviewee knowledge was limited to external information obtained from the media or exchange of information with other colleagues, as one interviewee from a private company expressed: *I have a general knowledge about this from trade press and some informal discussions I had with some other colleagues*. In other cases, the interviewee was highly aware of, and even involved in, the CNC development process. A quote

from an interviewee from the other organisation category demonstrates high awareness and involvement: *we take the place in almost every actions our coordinator from the Baltic corridor takes*.

*4.1.2. Expected benefits*

A strengthened economic development was the expected benefit that was most prominently mentioned during the interviews. Infrastructure development is expected to increase trade opportunities, and thereby enhance business development and support the regional economy. An interviewee from the other organisation category expressed: *more cargo, more turnover, more business, more jobs to the region*. The prioritisation of long stretches that will provide stakeholders with smooth and easy access to European markets was acknowledged. In addition, Sweden's importance as a supplier of raw materials from mining and forestry, as well as the volumes of seafood, such as trout and salmon, that Norway exports, were mentioned. The need for efficient import routes was also recognised.

A better visualisation and thereby information of the flow of goods in the corridors was another expected benefit. The CNC development is expected to draw attention to where bottlenecks are located in both sea and hinterland transport, as well as to where investments are needed. The ability to receive EU funding for development along the corridors is a positive expectation, since the selected CNCs are in focus for EU transport development. On the other hand, it was suggested that CNC development might overshadow the need to develop the surrounding transport network. However, an interviewee from the public authority category noted that the CNC infrastructure standard goals could be met rather soon in, for instance, Sweden, which could then lead to further development of the surrounding network by applying the same CNC standard requirements to an expanded transport network.

Increased transport capacity and quality were further expected benefits from the CNC development. Speed and cost advantages as a result of the harmonisation of transport rules and regulations was identified, and especially mentioned how this would be important for railway transport. It was also noted that a more competitive railway would support environmental targets. In this way, the harmonisation of extensive transnational transport corridors was recognised as an opportunity for accomplishing more competitive rail transport.

Furthermore, improved connections to nearby big cities were stated as a positive expected outcome of the CNCs. An interviewee from the public authority category referred to big cities in an international context, whereas another interviewee from the infrastructure company/organisation category also referred to big cities within the country. The latter also stated that improved accessibility to big cities was a political target in the region where he was located. Another mentioned benefit was an increased awareness of, and interest in, cross-border infrastructure planning. The following statement is from an interviewee in the public authority category: *it facilitates the planning process, as you know that the links on the other side of the Baltic Sea are ready to receive or generate a certain amount of traffic impact* (translated from Swedish by the corresponding author).

*4.1.3. Expected drawbacks*

A disappointment was expressed about how the sea transport mode is represented in the CNCs, as well as concerns about how sea transport will be affected by the CNC development. The interviewees who commented on these matters either work in, or are connected to, sea transport related areas. Sea transport is generally considered to be a relatively environmentally friendly transport mode, and rail and sea transport has been promoted as a better combination for the transport of goods than truck transport along roads. This is manifested in European and government goals for lowering greenhouse gas emissions. For instance, the European White paper on transport states that "30% of road freight over 300 km should shift to other modes such as rail or waterborne transport by 2030, and more than 50% by 2050, facilitated by efficient and green freight corridors" (European Commission, 2011, p. 9). However, the CNC stretches presented by the European Commission (see Figure 2) foremost concern rail and road transport, and sea transport is marked mainly with hubs at

**Figure 2. Map of the TEN-T core network corridors.**

Source: European Commission (2017).

ports. An interviewee from the category private company expressed, referring to the TEN-T initiative: *the slogan, from road to sea, somehow is forgotten in this whole aspect.*

The aspect of sea transport can, however, be found in the concept of Motorways of the Sea (MoS), which is included in the TEN-T development as a key transport area (European Commission, 2017). In the same way as for the nine CNCs, a European coordinator is appointed to enhance MoS development. A Motorways of the Sea project can provide start-up aid for transport services; for this reason, private sector actors are anticipated to have an active role in these projects, although the EU member state is the beneficiary of the funding (European Commission, 2005). In contrast, the creation of road or rail infrastructure is more likely to be a public responsibility. Another interviewee from the other organisation category stated that *motorways of the sea, that is no infrastructure. Then you are completely dependent on the presence of shipping companies that think it's profitable to run a business there* (translated from Swedish by the corresponding author).

Interviewees also voiced concerns about how the regions that are not located directly on the corridor can benefit from CNC development. As an interviewee from the other organisation category put it: *this way of thinking is still supporting the strongest regions, and strongest sea ports, strongest connections, but the deal is to develop such a transport network which can support more regions*. A risk that was mentioned when solely focusing on the CNCs is that the transport network can become static and it would become hard to develop something outside of the CNCs. Furthermore, the smaller transport network that surrounds the major corridors was perceived as important to door-to-door transport since the origin and destination of the transported goods often lie outside of the major route. Another perspective was that the growing flows of goods in the Baltic Sea area are likely to cause congestion and hamper main transport routes; therefore, a polycentric approach could ease congestion by using several alternative routes.

### *4.2. Comments about the preliminary interview results*

Results from the interview study were presented for discussion at a TENTacle Advisory Board meeting. A main discussion point was the participation of private sector stakeholders in the CNC implementation process. The regional and local perspective was highlighted in the discussion, and a need to include stakeholders outside the immediate CNC. Businesses were expected to be interested in the local benefits that arise from CNC development. In this context, infrastructure and transport solutions connecting the CNC to local networks need to be considered in the implementation process. On the other hand, it was recognised that putting too much effort into the surrounding network might lead to less prioritisation of the major CNC, and prioritisation is necessary for achieving the cross-border harmonisation of large transport flows.

There were various opinions regarding the matter of sea transport. Some commented that sea transport is already included in the TEN-T process. Another participant expressed that sea transport routes should play a larger role in the coming TEN-T revision. Moreover, the short sea shipping initiative by the European Commission (European Commission, 2004) was mentioned as an opportunity to enhance the role of sea routes in the transport chain.

## 5. Discussion and conclusion

The interviewees' expectations of benefits and drawbacks can be sorted into three categories. The first category concerns *(i) matters that are already regulated* and the interviewees' opinions either agree or disagree with the targets and processes. The second category focuses on *(ii) unregulated matters that often have vaguely defined responsibilities and require diverse stakeholder engagement for improvement*. The third category includes *(iii) concerns about negative outcomes* in regard to common goals in society.

The first category, *(i) matters that are already regulated*, includes expectations of increased capacity and quality mentioned by the interviewees, including improved connections to nearby big cities. A more detailed interpretation of these statements implies that an improved infrastructure standard is important for the outcome. Targets for infrastructure development and harmonisation are a main part of the regulation (Regulation (EU) 1315/2013, 2013). In this regulation, it is mentioned that respective EU member state is responsible for the accomplishment of infrastructure standards within their country. Another example from the interviews is funding availabilities and the removal of bottlenecks. These matters have been considered in the regulation for financial support for development of TEN-T (Regulation (EU) No. 1316/2013, 2013).

Other expected benefits, such as improved traffic services, visualisation of goods flows and well-functioning cross-border infrastructure planning, are examples of *(ii) unregulated matters that often have vaguely defined responsibilities and require diverse stakeholder engagement*. These examples are not regulated in detail and are, to a high degree, dependent on complementary activities and diverse stakeholders. Regarding economic benefits, the need for diverse stakeholder involvement is even more emphasised, and reaches beyond the field of transport. The perceived drawbacks, such as less inclusion of sea transport and poor connection to the surrounding network, which fit into the third category *(iii) concerns about negative outcomes,* indicate that there are areas that require further attention during the CNC implementation process. The TEN-T policy should be aligned with other goals in society (EU regulation No. 1315/2013, 2013), which, in the context of this transport initiative, include lower greenhouse gas emissions and regional connectivity for enhanced development and economic growth.

Results from this interview study indicate a need for cost-effective complementary governance in the CNC implementation process. Identified stakeholder requirements, expectations, wishes and fears serves as a starting-point for the analysis of complementary governance. When diverse stakeholders influence the implementation process their positive expectations can be reinforced and negative expectations avoided or mitigated. Governance structures and processes are tools that coordinate stakeholder interventions and steer activities towards a positive outcome. Diverse

complementary governance activities could be developed to address the three diverse categories of expectations identified from the interviews. For matters that are already regulated, adjustments in the ongoing governance arrangements could be initiated. An example of such adjustments is an extended participation of selected stakeholders in the formal processes of implementing the CNCs. In unregulated matters, new governance arrangements could be formed among stakeholders to clarify responsibilities or reach common objectives. An example for this category is to arrange stakeholder groups for collaboration or consultative purposes. Regarding concerns for negative outcomes examples of complementary governance could include directed information to avoid misunderstandings, or other governance activities to focus on the problem area. The addition of complementary governance measures might strengthen outcomes and moderate unwanted effects, but the cost-effectiveness, as well as consequences, of these measures must also be carefully considered and monitored (Givoni, 2014). In addition, complementary governance should be aligned to the goals of the TEN-T policy (EU regulation No. 1315/2013, 2013) and other goals in society on a European level (Russo et al., 2016), as well as other levels of governance. Other transport measures must also be related to for a relevant outcome, for example regulations for restricted Sulphur oxide emissions by ships in the Baltic Sea (International Maritime Organization Website, 2017).

Results from this interview study indicate that the CNC implementation process still requires wider stakeholder participation, with a special focus on including stakeholders from the private businesses. When the presented range of positive and negative expectations is considered, a more diverse group of stakeholders than is currently involved in the formal governance is needed to fulfil expectations and allow stakeholders to fully benefit from the CNCs. For example, for the CNCs to support an improved regional economic development, they should be utilised for smooth passenger and freight transports, providing exchange for competences and trade. Such exchange can take place both in the geographical corridor and in further connections to the CNC. Arranging and utilising such well-functioning transports include efforts from numerous stakeholders, such as decision-makers, infrastructure managers, transport organisers representing diverse or combined transport modes, authorities and private stakeholders. Additional to the field of transport, matters such as land-use and business development strategies are contributing. In the TENTacle Advisory Board meeting, it was commented that the engagement of regional and local stakeholders, including those within but also outside the immediate corridor area, is crucial to attaining the full range of benefits (see Section 4.2). It was further recognised in the TENTacle Advisory Board meeting that private sector actors, and local businesses as an important group of stakeholders to involve in the process. The importance of including stakeholders from different parts of society and layers of governance in decision-making, planning and policy processes has also been recognised in literature (Healey, 2006; Romein et al., 2003). However, it is important in the process to consider that all of the stakeholders have unique knowledge, views and prioritisations.

Results from this interview study indicate that stakeholders are open to complementary governance in the on-going implementation process. The interviewees' comments and views can be related to such measures. For example, the comment concerning the need for developing a transport network to support regions more broadly indicate openness for measures aiming to support this, although such measures are not discussed in detail. Even though this study investigates an on-going policy implementation process, the interviewee views cover a spectrum from already regulated matters and additional aspects for wider benefits to concerns about the outcome. A policy implementation process is not a static process in which everything is known beforehand. This process involves unforeseen aspects and the birth of new ideas, both of which need to be analysed and considered for the implementation to be successful. Healey (2006) encourages flexibility and continuous learning by stating: "The normative criterion that aims are effectively and efficiently achieved needs to be moderated to allow for learning during policy development and implementation processes" (p. 69).

Results from this study imply that complementary governance can be perceived as ancillary measures, which are described as measures that support primary policy measures in the field of policy packaging (Givoni, 2014; Justen et al., 2014). Complementary governance can facilitate the

legitimacy and feasibility of CNC implementation and thereby increase the overall efficiency of the TEN-T policy. However, complementary governance measures need to be aligned with the primary governance measures (i.e. coordinator work, Corridor forum, Work plan) to achieve their full potential. Furthermore, the complementary measures and the whole policy package must be scrutinised to ensure that the efforts do not counteract each other (Givoni, 2014).

In this study, costs and responsibilities for possible complementary governance has not been investigated, nor the role of the TEN-T comprehensive network. The results and suggestions presented in this paper provide a base for further discussion and validation, and one arena where this is expected to take place is the on-going TENTacle project where open stakeholder seminars, project meetings and "think tanks" as a form of focus groups are planned for the remaining project duration in 2018–2019.

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