

**MANAGEMENT BY GOOD INTENTIONS AND BEST
WISHES – ON SUSTAINABILITY, TOURISM AND
TRANSPORT INVESTMENT PLANNING IN SWEDEN**

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Abstract

The Swedish government, despite a possible value conflict with the ambitious Swedish climate mitigation objectives, has stated that tourism development is an important basis for economic growth, not least in rural areas. This paper explores how the Swedish policy making system, and ambitious environmental and traffic safety objectives, influence transport investment planning at the regional level. Our point of reference for evaluating the system is the work with good regulatory policy advocated by the OECD and used by the EU. The main finding is that the Swedish government and parliament lack a strategic “whole-of-government approach” to sustainable transport development. There are many principles and objectives with good intentions established at the national level that are incompatible in practice. The conflicts that follow are handed down to lower government levels to solve with best wishes. The problem with this type of management is the “tragedy of the commons.” Without clear guidance, individuals (and administrations) acting independently and rationally based on self-interests are likely to behave contrary to the best interests of the whole group (society).

Making choices based on a more holistic assessment of impacts and benefits and costs could help to prevent this kind of outcome. However, from the data collected it appears that many investments are undertaken without being assessed due to the lack of government instructions on regulatory impact assessment. Other investments are undertaken despite having a negative net benefit. One reason for this is specific instructions given by the government that points to certain investments. Another reason seems to be the Vision Zero policy established by the parliament. In recent years this policy has been a strong driver of improvements of the road system. Seen from an environmental perspective, the unwanted consequence of the priorities made is that state roads become faster and safer and thereby a more attractive alternative to other travel modes. Seen from a regional development and tourism perspective, this may have diverted resources away from investments that would have yielded a greater benefit to the tourism industry in “rural” areas.

Keywords: Sustainable transport, Tourism, Multi-level-governance, Regulatory impact assessment

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Introduction

According to the OECD, effective regulatory governance involves regulatory policies, tools, and institutions. Regulation is defined broadly and relates to various instruments on how governments put requirements on enterprises and citizens. It includes rules issued at all levels of government as well as by other bodies to which governments have delegated regulatory powers. In their most recent recommendations, the organization focuses to a greater extent on the need for regulatory coordination across levels of government referred to as a “whole-of-government approach” (OECD, 2012)¹. In recent papers OECD raises the need for this approach in tourism development (Haxton, 2015) and for the effectiveness of public investments in multilevel governance systems (OECD, 2013a).

Regarding Sweden, OECD evaluations (OECD, 2004; 2007; 2010; 2014a; 2015) have found that current policies related to growth and environment are neither innovative nor efficient. One reason is according to OECD that in the current system the ministries do not take a clear lead on strategic issues (OECD, 2014a and 2015). This implies an avoidance of, at least an explicit, discussion of conflict between societal goals at the central government level. Policies are not coordinated since it is left to various bodies, and individuals, to interpret government policies and design measures based on these interpretations. That this is a problem in Swedish transport policy is also discussed in a report from a committee of inquiry (Government Official Report 2009:31). Therefore, in this paper we investigate if these propositions are legitimate and if so, what the reasons for them might be.

These findings may appear somewhat contradictory since sustainable development is high on the policy agenda in Sweden. The country is also by many considered a frontrunner in the area of environmental policy (Hysing, 2014). Sustainability is guided by national objectives established by the parliament in the end of the 1990s. This was in the wake of the so called Brundtland report which established the concept of sustainable development (The World Commission on Environment and Development, 1987). This was also during a period of administrative reform in Sweden. It was influenced by New Public Management ideas (Agerberg, 2014) with a focus on performance management, i.e. management-by-objectives (Pollitt, 1995). It was also a period where Sweden advocated the use of the precautionary principle (Lofstedt, 2003).

15 (later 16) environmental quality objectives (EQOs) were established to be reached within one generation. For some of these, for example Clean Air, the final goal is total risk elimination. Furthermore, the parliament adopted the so-called Vision Zero policy, which is based on the ethical standpoint that no one should be killed or suffer permanent injuries in road traffic. How to reach these ambitious objectives has been a question for governments and government agencies ever since. This has also been an issue discussed in both public media and the academic literature, not the least in relation to transport policy (Edvardsson, 2004; Sundström, 2005; Härdmark, 2006; Brännlund, 2008; Swedish Research Council, 2008; Eckerberg et al., 2012; Edvardsson Björnberg, 2013; Pettersson, 2014; Azar et al., 2014; Hysing, 2014; Nordén, 2015).

At the same time as these objectives were adopted Sweden started to move towards a multi-level-governance system. Constitutionally Sweden has two levels, the national (central) and the local (municipalities and county councils). However, in 1997 the structure started to change with a

¹ OECD (2006) define whole-of-government approach as: “one where a government actively uses formal and/or informal networks across the different agencies within that government to coordinate the design and implementation of the range of interventions that the government’s agencies will be making in order to increase the effectiveness of those interventions in achieving the desired objectives”.

transfer of power from the central state agency at regional level—the County Administration Board—to either a directly elected regional assembly or to the Regional Council (Stegman Mccallion, 2007). This regionalization of power was reinforced when a new government *Alliansen*, a coalition led by the Conservative party, came into office in 2006². With the new government there was an orientation towards more performance scrutiny in combination with an intensified market-oriented approach in the provision of social services. The government also made changes in order to increase cooperation between municipalities at the regional level, special priorities being placed on projecting infrastructure, coordination of land use planning, regional transport planning and regional growth programs (Montin, 2016; Ministry of Industry, Employment and Communications, 2006; Ministry of Enterprise, Energy and Communications, 2014a).

So what is the outcome of the reforms taking place in the Swedish governance system in the last 20 years with the combination of ambitious national sustainability objectives and regionalization of decision making? In this paper tourism is used as a case study to explore this issue. Tourism is focused upon since it is considered to be a sector that can make important contributions to economic growth in Sweden, not least in rural areas (Ministry of Industry, Employment and Communications, 2006; Ministry of Enterprise, Energy and Communications, 2012b). However, since tourism relies on transport which, according to the OECD (2015) is one sector targeted by the government in order to achieve the established ambitious climate objectives, there is a possible value conflict. To address this conflict the Swedish Transport Administration (STA), together with a number of other government agencies, have been commissioned to explore how an increase in tourism can be accommodated in a sustainable way. Therefore, one of the “strategic challenges” of the STA is that its work should “contribute to more attractive and climate-friendly travel and transportation for the tourism industry” (Swedish Transport Administration, 2011).

Given the role of the STA in the work related to sustainable tourism, in this paper we focus on the most recent national transport investment plan. These are investments that will have a long term influence on ways to travel which in turn may have a significant influence on the sustainability of tourism development. The development of this plan is a main responsibility for the STA but based on instructions from the government. However, the regional level³ is also involved in the planning process since this is where the responsibility for regional sustainable development currently rests. To be able to understand the planning outcomes, and the interplay in the governance system, we first describe and discuss the prerequisites for the work with sustainability, regional development and transport investment planning in Sweden. Thereafter we use a multi-case study approach (Stewart, 2011) to explore what factors that influenced the actual planning. We have studied the outcome in four “rural” regions with tourism destinations of national importance that are currently heavily dependent on car use. Finally, we have collected additional information from other recent assessments of the Swedish system for transport investment planning

The outline of this paper is as follows. In the next section we describe current research on public management and the use of economic theory in this kind of research. We also briefly describe the

² The empirical data in this paper relates to the 2006–2014 period when a four-party, center-right coalition, *Alliansen*, was elected to the government. During this period, the Ministry of Enterprise, Energy and Communications as well as the Ministry of the Environment were in the hands of the Centre Party. Transport and tourism were areas handled by the Ministry of Enterprise, Energy and Communication and two central government agencies: the STA and the Swedish Agency for Economic and Regional Growth. Both of these agencies have regional offices.

³ Sweden is divided into counties but not all counties has its own regional authority and therefore we use the “regional level” or the “regions” in the general discussion. We use counties when we refer to the geographical regions in our case study.

method, regulatory impact assessment (RIA) including cost-benefit analysis (CBA), supported by the OECD and the European Commission. We then present the Swedish planning context with respect to sustainable development, regional development and transport investment planning followed by a description of the use of economic analysis and regulatory impact assessments. Then, based on the information presented in the regional transport investment plans and related material, we investigate how regional planners in the four counties chosen for the study discussed sustainability, economic efficiency, and tourism and what influence these aspects had on the outcome of the respective decision process. Thereafter we review some recent assessments of the Swedish transport planning system. We then discuss the problems with the Swedish planning context using microeconomic theory, the “whole-of-government approach,” and the tool regulatory impact assessment (RIA) advocated by the OECD as points of reference. The paper ends with a discussion of the implications of the current planning system for sustainable tourism development and what obstacles there is that prevent a more systematic and holistic approach to planning in Sweden along the lines suggested by OECD (2012).

Public management, microeconomic theory and impact assessments

Public management reform has been a research area for over 30 years but there is still a lack of knowledge of what works in different contexts and how a particular reform influence organizational efficiency (Saetren, 2005; Pollitt, 2013). One reason for this is according to Pollitt “prescription before diagnosis”. There is a lack of analysis beforehand of the reasons for the problem and what changes that are likely to improve the current situation. Such an analysis would according to Pollitt (2013) constitute a model of the problem which is something useful for practical analysis. Consequently methodological issues are discussed in the literature (Stewart, 2011; Heckman, 2015) as well as the need for a theoretical basis (Bramwell & Lane, 2011). Economic theory for example has been suggested and applied in the public management literature (Bramwell, 2011; Kotchen, 2013).

Other aspects that complicate the analysis are the increasing complexities related to new governance structures involving more and more actors at a certain government level having varied interests and priorities, but also the influence of horizontal relations across regional, national and international levels (Young, 2002; Conteh, 2013; Bramwell & Lane, 2011; Farmaki, 2015; Mörth, 2016). This implies challenges for the analysis of the functioning of a governance system. This is particularly the case regarding tourism since it entails a complex planning context with involvement of actors both from within and outside the tourism policy domain. Hall (2011) discusses the need for interaction between different scales of governance and that the region, which has often been interpreted as being the optimal scale for sustainable management, are framed by national and supranational institutions.

The economic models used in the public management literature relates to microeconomic theory which encompasses a range of topics related to the functioning of the market and the role of the state. This theory is also used to analyze the functioning of multilevel governance systems. Environmental and fiscal federalism⁴ are examples of research areas that analyze which level of government should undertake specific regulatory responsibilities (Oates, 2010; Willians III, 2012; van 't Veld and Shogren, 2012), how to create efficient incentives (OECD, 2013a; Jamet, 2011), and how to finance work undertaken at different levels of government (OECD, 2013b). Hence, economic analysis can be used to analyze questions of roles, responsibilities, and division of labor in a government system. In a complex multilevel governance system, it can also help to understand

⁴ According to Niklasson (2016) federalism is an American term applied for the relationships between levels of government.

incentives, clarify trade-offs, and identify winners and losers of various government policies and regulatory governance approaches.

Microeconomic theory is also a basis for the international discussion on regulatory decision making and good governance, and for OECD's recommendations (Hahn and Tetlock, 2008; Ruffing, 2010; Delbeke et al., 2010; OECD, 2012; Nyborg, 2012; Parker and Kirkpatrick, 2012; Banzhaf et al., 2013; European Commission, 2015). To achieve the goal of good governance, the OECD recommended the tool regulatory impact assessment (RIA) to be used in the early stages of the policy process⁵. According to OECD (2009), RIA is a tool but also a decision process for informing political decision makers on whether and how to regulate in order to achieve public policy goals. As a tool, it is used to collect information on the potential impacts of government actions by asking questions about costs and benefits, and as a decision process it contributes to the dissemination of the effects of regulatory proposals to a wider audience. While RIA alone is not sufficient for designing or selecting policy instruments, according to the OECD (2009) it is an approach that has a key role in strengthening the quality of policy debate by making the potential consequences of decisions more transparent.

Radaelli (2010) gives the following description of RIA: "In its most complete form, RIA is an administrative requirement to examine proposed regulation by performing a series of steps, including problem definition, the analysis of the status quo, the definition of feasible options, the choice of decision making criteria, open consultation with a wide range of stakeholders, the analysis of how different stakeholders, the environment and public administration are going to be affected by proposed rules, and, in some countries at least, a recommendation for the adoption of a specific regulatory or non-regulatory option. Impact assessment is a process, but it is often also a formal document providing a summary of the steps undertaken."

The recent OECD guidelines on regulatory policy and governance (OECD, 2012) emphasize the importance of the initial assessment of the problem that a policy is intended to solve and of the evaluation of alternative policy options. It is also stated that to be effective, the use of RIA should be supported with clear policies, training programs, guidance, and quality control mechanisms for data collection and use. Furthermore, governments should conduct systematic reviews to ensure that regulations remain up to date, cost-justified, cost-effective, and consistent, and that they deliver the intended policy objectives. The OECD also provides information on these issues for example by conducting economic analysis of environmental policy instruments (Pearce et al., 2006; Ruffing, 2010).

An important aspect of RIA is the assessment of benefits and costs using CBA. CBA is according to the OECD (2009) a well-developed and widely accepted method, despite the practical issues related to its implementation. To evaluate and choose between regulatory options, the following criteria are commonly used by governments according to Coglianesi (2012):

- *Impact/effectiveness*: How much would each regulatory option change the targeted behavior or lead to improved conditions in the world?

⁵ RIA increasingly used internationally (Ruddy and Hilty, 2008; Bäcklund, 2009; Delbeke et al., 2010). Many countries have a legal framework that stipulates the use of economic analysis, including CBA, in regulatory work. In both the UK and Norway, for example, the respective ministry of finance has responsibility for this type of analysis being used by central government bodies. These institutions also issues guidelines on how the analysis should be done (HM Treasury, 2011; Ministry of Finance in Norway, 2014; Norwegian Government Agency for Financial Management, 2014).

- *Cost-effectiveness*: For a given level of behavioral change or reduction in the problem, how much will each regulatory option cost?

- *Net benefits/efficiency*: When both the positive and negative impacts of policy choices can be monetized, it is possible to compare them by calculating net benefits.

- *Equity/distributional fairness*: Taking into account that different options will affect different groups of people differently, the equity criterion considers which option would yield the fairest distribution of impacts.

Despite the many other changes that the Swedish governance system has undergone in the last 20 years, Sweden is lagging behind other countries in the use of RIA (Radaelli, 2010) and De Fransesco et al., (2011). The reason for this appear to be policy making traditions (Radaelli, 2010). These features make Sweden a very interesting case to study. According to economic theory it can be expected that individuals (and administrations) in such a fragmented system will act independently and rationally based on self-interest which is likely to result in an outcome that is contrary to the best interests of the whole group (society). However, as discussed by Parker and Kirkpatrick (2012) and Clifton and Diaz-Fuentes (2014), one size doesn't fit all. There may be traditions and institutional frameworks in a country that support efficiency in policy making which makes the approaches suggested by the OECD less relevant. The question then is if this is the case for Sweden.

An overview of the relevant Swedish planning context

All Swedish sectors of government must contribute to the fulfillment of the EQOs established in 1999. Currently, there are eight central government agencies that have a responsibility for specific EQOs, as stated in their instructions from the government.⁶ The Swedish Environmental Protection Agency has an important role since it, according to the instructions, has the responsibility to support the work with sustainable development based on the EQOs. It also has an important role in the work with environmental policy as it shall be a driving force in this work as well as provide support to other central government agencies. It must also provide updates on the state of the environment.⁷ There is also an All Party Committee on Environmental Objectives set up to secure broad political consensus on environmental issues. Its role is to advise the government on how the EQOs can be achieved in an economically cost-effective way. In addition, there is a system established for the collection of data on the state of the environment to which government agencies and country administrative boards provide information on a regular basis.

Regarding regional development, in 2006 the newly elected government launched a national strategy for regional competitiveness, entrepreneurship, and employment 2007–2013 (Ministry of Industry, Employment and Communications, 2006),⁸ which was followed by an ordinance on the work on regional growth (Ministry of Industry, Employment and Communications, 2007a). The strategy was

⁶ See <http://www.miljomal.se/sv/Environmental-Objectives-Portal/Undre-meny/Who-does-what/> for a description of the responsibilities of different levels of government.

⁷ <http://www.miljomal.se/sv/Vem-gor-vad/Nationella-myndigheter/Naturvardsverket/>

⁸ According to the strategy, a distinct regional and local influence must be exerted on the development work since the conditions for regional development vary. Each region should be given sufficient responsibility and authority to allow it to grow based on its own unique circumstances. It is also stated that individuals and businesses are better able to strive for success and take advantage of powers of development and dynamics where they live and work if growth policy is adapted to suit regional conditions. According to the government, the regional plans should be strategies for sustainable regional development, which means that they are drawn up based on a holistic view of the regions' long-term development. Tourism is mentioned in the area of *entrepreneurship*, while transport is discussed under *accessibility*.

the basis for implementing the EC's structural funds in Sweden and was to provide guidance for both regional growth programs and central government agencies. The Swedish Agency for Economic and Regional Growth was given the main responsibility for carrying out the strategy. Following a commission by the government, three thematic groups were established to increase the cooperation between the regional and national levels. The STA was responsible for the group on accessibility in relation to sustainable regional growth (Swedish Transport Administration, 2012a). According to a communication to the parliament on the outcome of the strategy (Ministry of Enterprise, Energy and Communications, 2013a), 18 central government agencies are involved in the strategic work, of which 12 were given instructions in 2009 to develop strategies on how to contribute to the work with regional development.

After an evaluation in 2012, an updated version of the strategy for growth was adopted in 2014 (Ministry of Enterprise, Energy and Communications, 2014a). This strategy was called "a national strategy for regional growth and attractiveness 2014–2020" and has a broader scope than the previous one.⁹ According to the OECD (2014b), it adopts a cross-sectoral approach and will rely on multilevel governance for dialogue and learning. 13 central government agencies were to develop internal strategies on how to support the regional level with implementing the strategy, among them the Swedish Environmental Protection Agency and the STA¹⁰, with the Swedish Agency for Economic and Regional Growth as support and coordinator (Ministry of Enterprise, Energy and Communications, 2014b). In this strategy, *accessibility* has been replaced with the priority *attractive environments*. Issues related to sustainable transport are discussed under this heading, along with physical planning, accessibility to service, and culture and leisure. Hence, this strategy makes a clearer statement on the need to consider all three dimensions related to sustainable development in the regional work on growth and development.

As for tourism, after their reelection in 2010 the government initiated activities to support the development of the tourism industry. In 2010, a coordination group for central government agencies working towards this sector was established (Swedish Agency for Economic and Regional Growth, 2010). The tourism sector itself also developed a national strategy (Svensk Turism AB, 2010). There has not been a governmental national strategy, but in 2012 the Swedish Agency for Economic and Regional Growth was commissioned by the government and obtained 60 million SEK in funding to undertake a project on how to support sustainable tourism development. A few destinations of national interest were to be used as case studies (Ministry of Enterprise, Energy and Communications, 2012b). A number of other central government agencies, including the STA, were tasked to contribute to this work. Hence, tourism has been on the STA's agenda for a number of years.

The transport sector, finally, has by tradition been a responsibility for the national government. Transport policy is guided by a number of goals and principles. An overriding long-term goal, in addition to the EQOs, is the Vision Zero policy adopted by the parliament in 1997. According to the STA, this policy is based on the ethical standpoint that no one should be killed or suffer permanent

⁹ This is now replaced with a new strategy presented by the Minister of Rural Affairs of the new government on July 9, 2015.

¹⁰ Recently, the STA presented its strategy on how to contribute to the work on regional growth (Swedish Transport Administration, 2015). According to this document, an important role of STA is in planning both regarding the transport system in the regions but also to provide support on public transport policy. An additional task is provision and analysis of transport data including information on benefits and costs. STA also has the responsibility for capacity planning regarding the use of the railway system, maintenance of state roads and railways, as well as subsidizing of non-profitable interregional public transport to sparsely populated areas.

injuries in road traffic. This objective has influenced the STA's work in several ways, for example resulting in the establishment of a governance system involving evaluations, use of indicators, collaboration in networks and a yearly conference focusing specifically on traffic safety.¹¹ Concretely, there is for example an established objective that 75 percent of the state roads with a speed limit over 80 km/h shall have a median barrier by 2020. Another measure is to build more secure road crossings in municipalities for pedestrians and bicyclists. As shown in Figure 1, these types of investments have also increased in recent years.

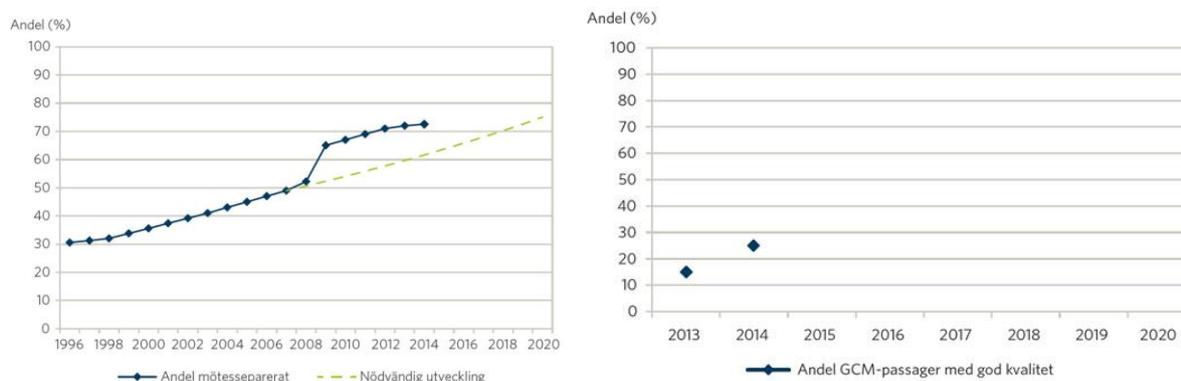


Figure 1 Indicators for investments in median barriers and pedestrian and bicycle crossings (source: Swedish Transport Administration)

In 2008, the new government established a new overriding goal for Swedish transport policy (Government Bill 2008/09:93). According to the bill, the goal is to ensure economic efficiency and long-term sustainability of transport provision for citizens and enterprise throughout Sweden. In addition, the parliament has adopted a functional goal – accessibility – and a consideration goal – safety, environment, and health.¹² Furthermore there are, according to a recent report by the NAO (2012), five guiding principles adopted by the parliament:

- Customers shall be free to choose how to travel and conduct transport.
- The decision making on transport production shall be decentralized.
- The coordination between transport modes shall be supported.
- Competition in the transport sector shall be supported.
- The socio-economic cost of transport shall inform the design of policy instruments (also referred to as marginal cost pricing).

The transport policy implemented by *Alliansen* was guided by the four-step principle (Government Bill 2012/13:1). This principle has been developed by the STA and the idea of it is to evaluate various ways to develop the transport system before deciding on making larger infrastructure investments. The first step is to investigate measures to influence transport demand while the fourth step is new investment. In relation to environmental sustainability, the government says in the bill that it is working to make the taxes in the area of energy and climate more efficient. It has also set up a

¹¹ The STA coordinates an organized network, Gruppen för Nationell Samverkan (GNS), that works with these issues (<http://www.trafikverket.se/for-dig-i-branschen/samarbete-med-branschen/samarbeten-for-trafiksakerhet/gruppen-for-nationell-samverkan-inom-trafiksakerhetsomradet-gns-vag/>). The national seminar on traffic safety, Tylösandsseminariet, has been organized by MHF, an NGO focused on reducing drunk driving, since 1957. A number of other actors are also involved in the organization of the seminar, see <http://www.mhf.se/sv-SE/sakrare-i-trafiken/tylosandsseminariet/>. Web information accessed 10 November 2015.

¹² <http://www.Government.se/Government-policy/transport-and-infrastructure/goals-for-transport-and-infrastructure/>. Accessed 8 November 2015.

commissions of inquiry that is to suggest policy measures for achieving the vision of a fossil-free vehicle fleet by 2030, which was introduced in Government Bill 2008/09:162¹³. The need for a combination of policy measures to achieve this vision is also discussed, along with the need for cooperation and coordination between modes of transport, policy areas, and the private and the public sector. Initiatives regarding research and innovation are also discussed, for example in relation to tests regarding electric vehicles and demonstration plants for second generation biofuels.

The government also introduced changes to the process of infrastructure planning (Government Bill 2011/12:118). According to this bill, planning is divided into economic and physical planning and one aim with the changes is to clarify the connections between these two planning processes. Regarding the physical planning, the bill lays down that “A preparatory study with an unbiased multimodal analysis and application of the four-step principle should take place before any formal physical planning and design.” Reference is made to the use of the strategic choice of measures method that the STA has begun to develop. This method is seen as a possible means to a connection between the economic and the physical planning. The role of the regions is also discussed and the need for relevant data collection to support decision making is highlighted in order to reconcile the different views of local and regional policy makers. According to the government, this is needed in order to achieve an efficient use of resources and the overall goal for the transport policy.

During its time in office *Alliansen* adopted two transport infrastructure plans, where the most recent for the period 2014–2026, that is our focus in this paper, was adopted in April 2014. It was prepared in 2013 following an infrastructure bill adopted by the parliament in the fall of 2012 (Government Bill 2012/13:25). This bill contained measures related to transport infrastructure for the period 2014–2025 together with a proposed funding frame and guidance on priorities in the planning of measures in the national plan. The total investments funds was SEK 522 billion over a 12-year period. SEK 281 billion was to be spent on development to strengthen the transport system. This sum includes funding for the STA and some research, but it also includes funding to regions, which totaled SEK 35.4 billion, including 0.48 billion for subsidies to county airports. Following the bill, the STA and the regional transport planners were commissioned in December 2012 to develop a national multimodal plan for the development of the transport system (Ministry of Enterprises, Energy and Communication, 2012a). The new planning process was to be implemented in this work. STA’s planning should be undertaken in dialogue with other relevant central government agencies¹⁴ as well as regional and local actors.

Regulatory impact assessment and CBA in Swedish planning

Regarding the use of RIA and CBA, there is a separation of responsibilities between different governmental bodies. The Swedish Environmental Protection Agency has since 2010, following a committee of inquiry (Governmental Official Report 2009:83) and the Government Bill 2009/10:155, in its government instructions the responsibility to develop the use of economic analysis in the EQO system. This is to be done in collaboration with other agencies. For this purpose, a “platform” for

¹³ This inquiry has not yet (in March 2016) resulted in any government proposals on policy measures but there are other initiatives taken such as the 2030-secretariat (se <http://2030-sekretariatet.se/english/>).

¹⁴ The Swedish Environmental Protection Agency has for example sent comments to the STA on how they perceive that the instructions from the government should be interpreted (Swedish Environmental Protection Agency, 2013a) and also on the role of environmental impact assessment in the implementation of the strategic choice of measures method (Swedish Environmental Protection Agency, 2013b).

agency cooperation has been established where both the Swedish Agency for Economic and Regional Growth and the STA participate together with a number of other agencies.¹⁵

However, the formal instructions on the use of regulatory impact assessment dates back to 2007 when a single template replaced a set of different ordinances (Radaelli, 2010). According to the new ordinance (Ministry of Industry, Employment and Communications, 2007b), the Swedish Agency for Economic and Regional Growth has the overall supervisory responsibility for its implementation with the support of the Swedish National Financial Management Authority (Ministry of Industry, Employment and Communications, 2007b). There is also a body called the Swedish Better Regulation Council, which works with administrative simplifications for businesses.¹⁶ Support is provided to ministries, government agencies, and committees of inquiry that need to undertake impact assessments. The Swedish National Financial Management Authority recently, in early 2015, delivered a general guide on how to undertake impact assessment. This guide is similar to the content of an RIA but without details regarding the role of CBA and when and how to undertake such an analysis (National Financial Management Authority, 2015).

The only central government agency in Sweden with a long tradition of using CBA is the Swedish Transport Administration (STA). To provide a scientific basis and establish basic principles for CBA calculating, transport agencies and researchers have cooperated for over ten years in the group *Arbetgruppen för Samhällsekonomiska Kalkyler* (ASEK). However, the CBA method developed by the STA is mainly used to evaluate transport investments and its main influence appears to be as a screening tool (Eliasson and Lundberg, 2012). To address other planning issues the four-step principle and the methodology *Strategic choice of measures* has been developed (WSP, 2012; Swedish Transport Administration, 2013a). The strategic choice of measures method is a way to implement the four-step principle. A first concrete description of the method was presented in October 2010 and a final version in handbook form was published in October 2012 (Swedish Transport Administration, 2013a). The method has also been tested and evaluated; (Odhage, 2012; Poskiparta, 2013). Both evaluations concern the question of whether this method can contribute to a more holistic approach to planning with the involvement of many different actors making the decision process not only efficient, but also fair and just.

Much of the actual work regarding the implementation of the four step principle in the recent plan was, according to the government's instructions, left to the STA and the planners at the regional level (Ministry of Enterprises, Energy and Communication, 2012a). This relates to physical planning where the STA, together with those involved in the establishment of regional transport infrastructure plans and regional development plans, are to present suggestions on how to improve the coordination between actors involved in growth and physical planning. Also the possibility to use policy measures to influence demand should be considered when analyzing available alternatives. The measures chosen should contribute to fulfillment of the goals for transport policy by being economically efficient and contributing to reduced climate impact and an optimal use of the transport system. The template titled *Samlad effektbedömning* (a method for collective effect assessment which includes a

¹⁵ <http://www.naturvardsverket.se/Miljoarbete-i-samhallet/Miljoarbete-i-Sverige/Uppdelat-efter-omrade/Miljoekonomi/Samhallsekonomiska-analyser/Plattformen/>

¹⁶ It is stated on its webpage (<http://www.regelradet.se/en/>): "The Swedish Better Regulation Council is a special decision making body under the umbrella of the Swedish Agency for Economic and Regional Growth. The members of the Council are appointed by the government. The Council is responsible for its own decisions. Its tasks are to review and issue opinions on the quality of impact assessments to proposals with effects on business. The Council shall also on request from regulators review impact assessments on EU-proposals that are assessed to have a great impact to businesses in Sweden."

CBA), which has also been developed by the STA, should be used for both single measures and the plan as a whole.

Investments and prioritizations in four “rural” tourism regions

This case study is based on the plans, and some complementary information, developed in the following four counties: Kalmar (Regional Development Council for Kalmar County, 2014), Dalarna (Regional Development Council for Dalarna County, 2013), Jämtland (Regional Development Council for Jämtland County, 2014) and Norrbotten (County Administrative Board for Norrbotten, 2014). These are all more “rural” counties where tourist destinations of national importance are located. All plans were developed by regional development councils except for Norrbotten, where this responsibility rests with the County Administrative Board. According to the reports, all plans were developed in some kind of dialogue with major stakeholders such as municipalities, the regional office of the STA, county administrative boards, organized interests and, when relevant, neighboring countries. However, the dialogue process is only briefly described and it is not clear to what extent the civil society has been informed and involved, nor are any details regarding the representation of organized interests given.

The geographical planning prerequisites facing the regional transport planners and the STA differs in different parts of Sweden which is illustrated in Figure 2. It consists of three maps: the map to the far left shows the counties in Sweden, the map in the middle the state roads managed at national level, and the map to the right illustrates accessibility to tourism destinations. Areas colored green in the latter have a good accessibility meaning that the population can reach the main destination in the community within five hours of travel time. Yellow colored areas have acceptable accessibility. From these maps it is obvious that there is a big difference between the north and the south of Sweden. The road network of state roads is much denser in the south and this also seems to have implications for accessibility to tourism destinations. The maps also show that the regions in the north cover larger areas.

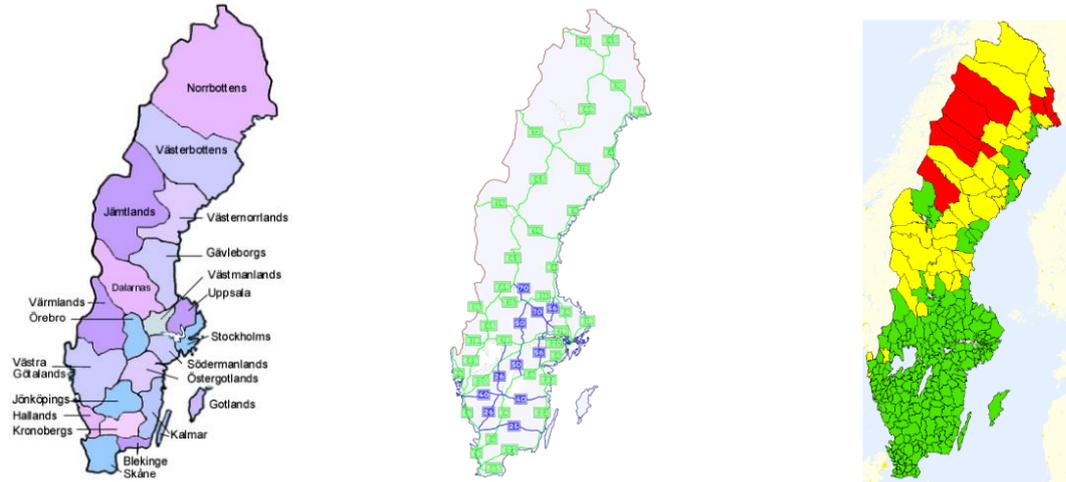


Figure 2 Maps illustrating the counties, state roads, and accessibility to tourism destinations in Sweden (source: Swedish Transport Administration)

Sweden is by international standards a sparsely populated country, especially in the north, and currently about 75 percent of all leisure trips are taken by car (Swedish Agency for Economic and Regional Growth, 2012). Travel by train to more distant destinations in the north is declining (Ramböll, 2015). Thus, the focus in our analysis is on investments in the road network but we also present some information about the discussions and decisions regarding other travel modes.

The geographical differences are not reflected in the funding, as illustrated in Table 1. Norrbotten in the far north, with a geographical area about ten times as large as Kalmar and twice the length of regional roads, received less government funding. Although one explanation for the difference could be that Norrbotten, as well as Dalarna and Jämtland, are mountainous and sparsely populated in the west on the border to Norway, it is probably not the only reason for the difference. Dalarna also stands out by having received more funding than Norrbotten and Jämtland despite a smaller area and fewer kilometers of regional roads. This is possibly due to the funding to the regions varying over time, but it could also be a consequence of the current system in which funding decisions are preceded by bargaining between the national government and the regions. This aspect of the planning process is most clearly illustrated by Jämtland. In their report it is said that they have tried to highlight the shortcomings in the national transport system in the region and have tried to get these needs cared for by national funding. Yet another reason could be EU funding through the structural funds.

Table 1 Some descriptive statistics of the counties, their tourist destinations of national importance, and the funds they received for transport investment

County	Population	Area (km ²)	Regional roads (km)	Tourist attractions of national interest	Government funding, SEK
Kalmar	233,168	11,218	3685	Vimmerby (and Öland)	836 million
Dalarna	276,770	28,189	4434	Sälen (and Idre)	1037 million
Jämtland	112,717	34,009	5413	Åre (and Duved)	503 million
Norrbotten	250,000	100,000	7565	Kiruna (with surroundings)	784 million

Since the content of a new plan is a consequence of previous plans, we have used the information presented on the STA’s project webpages to get “a bird’s-eye view” of ongoing work in the counties. As illustrated in Figure 3, the webpages contain information on planned and ongoing projects in the whole country¹⁷. The information for each county is provided by the regions of the STA¹⁸ since they undertake the actual implementation of the planned investment objects at the regional level. The objects presented are a mixture of investments in state and regional roads and of objects from the new but also previous transport investment plans. In addition to locations, additional information is presented such as the motive for the investment, the current planning stage, and also in most cases some planning documents. A closer inspection of these documents showed that they rarely contain a CBA of the object.

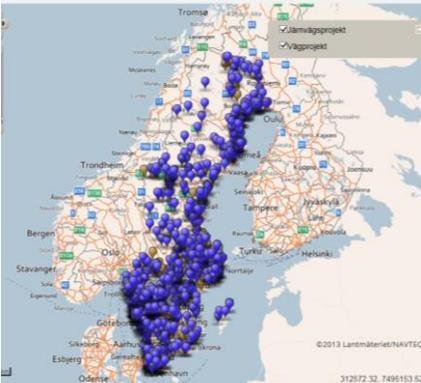


Figure 3 Ongoing road improvement projects in Sweden in December 2015

¹⁷ See <http://www.trafikverket.se/for-dig-i-branschen/planera-och-utreda/>.
¹⁸ There are six regions within the STA (middle, north, Stockholm, south, west and east).

The result of our data collection is that in the end of 2015 there were a total of 139 ongoing projects specified for the road system in the studied counties (see appendix 1). For new investments (78), a majority are motivated by traffic safety. 39 involves the construction of walking and biking paths (of which 1 related to public transport and 1 to tourism). Of the remaining projects, quite a large share are maintenance or other reasons such as strengthening of bridges and moving a stretch of a road to reduce the risk of collapse or pollution of drinking water. So what are the reasons for these prioritizations? A similar focus on new investments in the road system, is also found in the new transport investment plans for the regions. More than 70 percent of the funding is to be spent on measures that will improve the road system and traffic safety; see Table 2 row one and two.

Table 2 Funding purposes in regional transport investment plans (million SEK)

	Norrbottn	Jämtland	Dalarna	Kalmar	Total (%)
Road investment	306.1	241	747.5	427	1722 (53)
Walking/biking and other safety	216	148	157	91	612 (19)
Municipality roads	123.9	12	36	0	172 (5)
Private roads	22.5	12	5	12	52 (2)
Rail investments	20.5	2	27	173	223 (7)
Air	0	0	51.8	57	109 (3)
Public transport	32.5	12	52	79	176 (5)
Strategic choice of measures	12	14	6	3	35 (1)
Measures to influence demand	0	0	12	5	17 (1)
Unplanned investments	26.5	73	0	26	126 (4)
Totalt (million)	760	514	1094.5	873	3242 (100)

To understand the outcome presented in Table 2, we have to recapitulate the central government's instructions to the regional planners (Ministry of Enterprise, Energy and Communications in Sweden, 2012a). As described, the plans are based on a new planning system. According to the government's instructions, the plans should be based on an impact assessment called *Samlad effektbedömning* for single objects as well as for the plan as a whole. The instructions also provide that priority should be given to objects that are important for sustainable commuting, for industry development, and for cross-border transport. Furthermore, it is pointed out that the funds can mainly be used for physical investments. These can be of various kinds, including improvements of public transport facilities and investments in biking routes and safety measures in relation to existing infrastructure. In making choices, the regions also have to consider the STA's national plan, to the needs of surrounding regions and neighboring countries. The government specifically addresses the need to improve infrastructure for biking and the regional planners should therefore specify the funding spent on such measures in the plans. Finally, in relation to an ongoing national initiative on changing the speed limits in the transport system, it is stated that the regional planners should base their plans on the existing speed limits.

The general transport planning context and the regions specific conditions are discussed in the regional plans. Since the regions are in large parts sparsely populated, car dependency and the importance of the road network are discussed. Norrbotten and Dalarna in particular discuss how various aspects influence quality and accessibility in the current road network. Allowance for heavier trucks for example has an impact on road wear, and the ongoing changes in speed limits influence travel times. The needs for alternative fuels to reduce carbon dioxide emissions from transport are discussed in all documents (except Jämtland's). The plans also lay down that the focus is on improving public transport in the densely populated areas in each country. Commuting by train is seen as a basis for development of the public transport system and regional enlargement, i.e. to increase accessibility to work places. The "doubling objective" aiming at an increased public transport use established by a partnership between actors in the public transport sector

(Partnersamverkan för en förbättrad kollektivtrafik, 2015) is also discussed. Jämtland clearly states that the distribution of the population in the county will make it difficult to achieve a large increase in the use of public transport, while Kalmar highlights the need for testing of new types of public transport, for example “transport on demand”.

When it comes to the content of the plans, Norrbotten, Kalmar, and Jämtland discuss the geographical distribution of the intended funding. In Norrbotten and Kalmar, quite a large share of the funding is set aside for minor projects in various parts of the respective county, often based on the demand of the municipalities. In Jämtland, a great deal of the funding is spent on road improvements in various parts of the county. This also appears to be the case for Dalarna. All regions give a small share of their funds to improvements of the railway system. The reason for this is mainly that it is a national responsibility. Kalmar and Dalarna have assigned funding to airports. All reports also contain some kind of analysis of how to obtain the most value for the money spent.¹⁹ Regarding public transport, for example, there is a discussion about where in the county it is most likely that such measures will influence travel behavior. It is also evident from the discussions that some of the trade-offs have been difficult to make.

Assessment of benefits and costs do not seem to have had much influence on the distribution of funding. The reason for this is, first, that a CBA has not been conducted for most of the objects discussed in the plans. Secondly, since the STA received the government’s planning instructions rather late, it appears that the regions obtained CBA information for road investments very late into the planning process (Transport Analysis, 2014). However, as shown in Table 3, yet another reason appear to be that even objects for which calculations have been made are chosen even though they do not generate a positive net benefit. Most of the objects for which we have found calculations are included in the national instead of the regional plan. In the last row in Table 3, we can see the number of objects that were included in the regional transport investment plans and in parentheses how many of these that had positive benefits (for additional details, see appendix 2). In most cases, a negative benefit is due to short travel time and small traffic safety benefits in relation to the investment cost. Only a few objects with negative net benefits are due to benefits not being captured in the analysis, which for example is the case for the construction of a roundabout and the moving of a road to allow for the expansion of a wood industry.

Table 3 Information on CBA calculations for roads in the regions

	Norrbotten	Jämtland	Dalarna	Kalmar	Totalt
Samlad effektbedömning 2013	11	1	11	1	24
Positive reduction in travel time	8	1	10	1	20
Positive reduction in deaths and severely injured	10	1	10	1	22
Non-negative environment (climate and air pollution)	0	0	4	0	4
Positive net benefit	3	1	6	1	11
Objects only in the regional plan (with positive NB)	3 (0)	0(0)	6(1)	1(1)	10(2)

Regarding tourism, the dependence on car use is described in all reports. In relation to this, the fluctuations in demand and traffic flow over the year, as well as the capacity problems in the road network associated with this, are discussed. For example, Kalmar states that there is a need for investment in rest areas along the roads for traffic safety reasons. Regarding their choice of

¹⁹ That policy makers make some kind of trade-off and assessment of costs and benefits of different alternatives is also found by Odeck (2010).

investment objects, all regions except Norrbotten²⁰ state tourism as one of the reasons for the need for improvements. The importance of air travel and airports is also highlighted, especially the need to make investments to increase the accessibility to the airports. Jämtland benefits from the airport on the Norwegian side of the border, as well as from ongoing improvement of the railway on the Norwegian side to this airport. Dalarna and Kalmar on the other hand discuss investments in airports in their counties. In Dalarna, the plan contains funding for a new airport close to the tourism destination Sälen, which is also expected to benefit tourism development in Norway²¹. Dalarna's report is clear about the need for additional investments in a new road if this object were to be effectuated. The question is raised about who should fund this change (regional or national level) as well as possible consequences if regional funds will be required.

As regards environmentally sustainable travel, climate is given a particular focus in all reports except Jämtland's. The plans for Dalarna and Kalmar include funding for measures to influence attitudes, which falls under step 1 of the four-step principle. Dalarna, however, concludes that the impact of the plan on the climate is likely to be small. In contrast, Norrbotten states that their plan is an important step toward a more sustainable society, a statement that is questioned by the STA's regional office in its response to the *remiss* (Swedish Transport Administration, 2013c). In most plans there is no evidence but an expectation, with reference to information presented by the STA, that the measures undertaken in relation to walking and biking will result in increased use of these modes of transport.

Roles and responsibilities in the governance system are also touched upon in the reports. According to Norrbotten, their plan is influenced by the instructions from the government. It is also clearly stated that they expect step 1 measures in the four-step principle to be handled in "a different order." They point to the plan as being only one of several means to influence transport development and the transport system. They mention that there is the investment plan regarding state roads, the EU cohesion funds, the tax rates established by the state where choices made can have important impacts. Dalarna states that the priorities are partly directed by the government's instructions but that there is the possibility to more or less freely choose measures that generate environmental and climate benefits. However, they also conclude that other changes that are likely to have a larger impact on the environment, such as the use of alternative fuels or IT infrastructure, are dependent on other measures undertaken by society.

A question raised by the regions in their reports, which is related to the economic aspects of road investments, is what the STA's future strategy for changing speed limits will be. If the STA's work to change speed limits continues, all regions envisage the need to transfer more funds during the planning period to minor investments in safety-enhancing measures along specific stretches of roads.²² According to the regions, such investments would be needed in order to keep existing speed limits and hence to maintain current accessibility. As this would crowd out investments for other purposes, the question is raised as to whether this is an efficient use of public funds. According to

²⁰ In the *remiss* procedure, the regional office of the STA asked why the possible needs of the tourism industry, given its expected growth, are not accounted for in any way in the chosen objects. The question of why priority was given to improvements of one specific road was also raised (Swedish Transport Administration, 2013c). This comment does not seem to have influenced the final version of Norrbotten's plan.

²¹ At the time of writing this project is discussed in the media since it appears that the government and the STA has not made all the preparations needed for the constructions to start as planned.

²² This appears to be the STA's intention despite the instructions from the government that the basis for the planning is that current speed limits will be maintained. According to a presentation by Ylva Berg from the Swedish Transport Administration (2013b) the work on adapting the speed limits to the conditions of the road will continue.

Norrbottnen, the STA discusses the possibility to consider the county as a “bubble,” implying that if carbon dioxide emissions increase due to some investments, then other measures have to be taken to reduce emissions elsewhere.

Other recent assessments of the Swedish transport planning process

The Swedish NAO has undertaken a number of assessments of the Swedish transport investment planning process. In NAO (2009) they evaluate the content of the regional transport investment plans that were presented to the government in November 2009, hence the previous planning period. It is concluded that the documents do not contain the information required according to the instructions from the government, in particular they lack a description of the expected impacts of the suggested investments. One reason for this is according to the NAO unclear prerequisites and division of responsibility between the regional level and the STA. The Swedish NAO (2009) concludes that there is a conflict between sharp government instructions highlighting a coherent and efficient planning nationwide and the government’s ambition to increase the regions influence on the content of the plans. This conflict is according to the NAO not handled at the government level but left to the regions and the STA to solve.

In late 2012, the NAO report related to the most recent transport investment planning process was published (after the government’s infrastructure bill 2012/13:25 was presented). According to this report, the four-step principle advocated by the government is an advanced governance approach that requires organization and resources in the ministry. Two of the recommendations to the government are (NAO, 2012):

- Ensure that policy instrument analyses are available as a basis for planning measures. Produce policy instrument analyses as a basis for planning measures and secure the production of necessary data. In the long term, full internalization of the marginal costs of transport should be pursued. Introduce clearer guidelines for four-step analyses and external quality assurance of major infrastructure investments
- Introduce more regulated four-step analyses, with mandatory reporting on how alternative solutions have been investigated, as well as external quality assurance of these analyses.

According to the NAO (2012, p. 45), neither the strategic choice of measures method nor the new planning system is sufficient to handle the problems that exist because currently there is a lack of marginal cost pricing. Due to this lack, the current transport demand may be too high or skewed, which in turn may result in inefficient investment objects being chosen. There is therefore a need for analysis of step 1 policy measures prior to choosing investment objects for the national transport investment plan. The NAO states that the government has not requested supporting documentation from the STA demonstrating the effects that can be achieved through pricing and other policy instruments, nor has it provided the STA with guidance on how the four-step principle, intended to facilitate the selection of effective measures, is to be applied with respect to policy instruments over which the STA has no control.

Another recent evaluation is part of a mandatory ex post analysis of the new planning process. The focus here is on the criteria used in the regional transport investment plans (Transport Analysis, 2014). More specifically, it concerns the relationship of the alternatives chosen with stated goals, the use of environmental impact assessment, and the use of CBA. A general finding is that reference is made to the fulfillment of the EQOs but that CBA is seldom used. Furthermore, little is said about the fulfillment of the goal for transport to ensure economic efficiency and long-term sustainability of transport provision for citizens and enterprise throughout Sweden. According to Transport Analysis,

the plans do not contain enough information to assess whether the chosen measures contribute to the transport policy goal. One explanation for this could be that the CBA information from the STA was delivered late in the planning process and could therefore not be the basis for the choice between measures. There is also a lack of information in the environmental impact assessments and on what role they have played for the chosen measures. Multi-modality is according to the report considered mainly in relation to the need for nodes. A conclusion is also that since regions interpret the new planning process in different ways, the analysis of the performance of the system becomes difficult.

The decision making at the regional level is also evaluated in a report by Niklasson (2013) commissioned by Swedish Agency for Economic and Regional Growth. The purpose was to analyze the results of projects related to “accessibility” that had been financed by the EU regional fund, one of the structural funds, since 2007. These are investments over which the regional level has been given a considerable influence²³. The report reveals that these funds make an important contribution to the total funds available for transport investments in the northern part of Sweden. It is concluded that there is a lack of motivation for the projects actually chosen and that the results are not evaluated. Furthermore it is difficult to relate the chosen projects to the overall development plans for the regions, as well as to the content of the national transport investment plans. One conclusion is therefore that a more holistic approach is needed and that the planning of the projects related to accessibility funded through the structural funds should be integrated with the national infrastructure planning.

From these evaluations it is clear that regulatory impact assessments are not systematically used in the planning of Swedish transport investments despite the methods developed by the STA. As regards CBA, its influence on the choice of transport investments in the previous transport investment plan for the period 2010–2021 has been discussed in several recent scientific papers (Eliasson and Lundberg, 2012; Börjesson, Eliasson and Lundberg, 2014; Eliasson et al., 2015). According to these papers, the objects chosen were primarily not based on an estimate of their net benefits, since CBA was performed after objects were selected. When deciding on investments, a two-stage procedure was performed where a first selection shortlisted 700 road and rail investments (Börjesson, Eliasson and Lundberg, 2014). Of these, 479 made it to the second stage, for which CBA calculations were made based on standardized methods. Substantial variation in net benefits for these investments was found, with nearly half yielding negative net benefits. Of the effects accounted for in the calculation, accessibility (travel time-related effects) dominates, accounting for approximately 90 percent of total benefits. A smaller share of investments with negative benefits are due to benefits not being captured by the CBA.

A lack of a whole-of-government approach to sustainable transport

This exploration of Swedish transport investment planning illustrates the complexities involved in implementing measures to foster sustainability in a multilevel governance system. The outcome of the planning process in the regions is according to the findings in the case study a focus on the improvement of the road system. This do not appear to contribute to the transport goal of an economically efficient and long-term sustainable transport system. Moreover, some of the proposed investments will benefit the tourism industry in “rural” areas, but most of them will not since the focus is on improvements in relation to commuting. It is also found that most of the proposed projects for which CBA calculations were done do not generate a positive net benefit. As can be

²³ The government’s management in relation to the structural funds is also discussed in NAO (2014) where criticism is raised regarding the lack of government control.

expected regarding the use of common government resources, individual actors and organizations are trying to “get a bigger piece of the pie” to serve the needs and priorities they consider relevant. Hence, it is clear from the case study and the other assessments presented above that more time and development will be needed before the Swedish transport investment planning process has a firm basis with clear objectives, roles, responsibilities, and established procedures.²⁴

There are of course many reasons for the outcome of the planning in the regions and the lack of a holistic and systematic approach to planning where tools such as RIA and CBA are a natural component. In our discussion we have chosen to focus on the influence of structural aspects related to the planning context and the instructions provided by the government to the planners. We focus on the following five factors which we think have had a significant influence on the decision processes and the outcomes:

- a) The influence of the Vision Zero
- b) The government’s focus on business development
- c) Neglect of the four-step principle
- d) Planning instructions imposing inefficiencies
- e) Regional differences, regionalization and Europeanization

a) The influence of the Vision Zero policy

The OECD has in its evaluations of Swedish environmental policy raised the question of what role the EQOs have in actual policy making. Exactly the same question can be raised regarding the Vision Zero since a long-term ambition of zero dead or seriously injured, is not compatible with the overriding goal for transport policy of an economically efficient system. The reason is that it will be too costly in practice to reach this goal, i.e., the costs will outweigh the benefits²⁵. The way the government dealt with this conflict, as well as the problems with the ambitious EQOs, was to say that more concrete operational goals would be developed over time (Government Bill 2008/09:93). The bill defined an ambition of reducing the number of fatalities from 440 to 200 per year by 2020 and this has since then become the established goal. This goal was suggested by the STA in 2008 (Swedish Transport Administration, 2008). So far the work has been successful, as there has been a reduction. In recent years the number of yearly fatalities in road transport has been around 270.

This goal, however, was not preceded by an analysis of cost, benefits, and unintended consequences. In the STA’s report, there is an assessment of the costs of achieving the objective of having 75 percent of the roads be equipped with median barriers by the year 2020, but not of the expected benefits in monetary terms. The report states that this objective can be reached via physical measures on 2000 km of road and reduced speed limits on 4000 km of road. Some positive impacts of these measures on other goals for society are discussed, i.e., that reduced speed will reduce emissions, that men will drive less aggressively and more like women, that the goal is similar to the

²⁴ To some extent, the government also appears to have recognized this since it writes in a communication to the parliament (Ministry of Enterprise, Energy and Communications, 2014c) that there are a number of ordinances that need to be updated. The Swedish Agency for Public Management was also in 2015 commissioned by the government to identify strategic development needs in the public administration (Swedish Agency for Public Management, 2015).

²⁵ Here it is important to understand that cost in economic terms implies the opportunity cost of spending money on, in this example, traffic safety measures instead of, for example, health care.

goal of the car manufacturer Volvo saying that no one should be killed or seriously injured in a Volvo, and finally that traffic safety is a prerequisite for good mobility and accessibility.

This traffic safety goal established by the STA is likely to be one important explanation for the finding that many investment objects are suggested and implemented despite have a negative net benefit. Hence, in practice, Vision Zero is overriding the transport policy goal that the transport provision for citizens and enterprise throughout Sweden should be economically efficient and long-term sustainable. The STA, despite what was said in the government's instructions (Ministry of Enterprise, Energy and Communications in Sweden;2012a), also envisages that the work on changing speed limits will continue in the future unless investments that increase safety are undertaken (Swedish Transport Administration, 2013b).

One unintended consequence of the Vision Zero policy is that investments are more likely to be spent on larger roads with more traffic and in larger urbanized areas (since larger traffic volumes reduces a negative net benefit in a CBA). Speed limits on the other hand are more likely to be reduced on smaller regional roads. This is a distributional problem but also a problem for the accessibility to tourism destinations. It is also something the regional planners have realized and have responded to. In their plans, they address the need to make road investments in order to avoid reduced speed limits. Investments in road traffic safety are therefore likely to crowd out other investments. Another unintended consequence of the Vision Zero policy is that it may work against environmental sustainability since by making road transport faster and safer car travel becomes a more attractive alternative to public transport.

b) The government's focus on business development

In 2006 *Alliansen* introduced a "better regulation" agenda, related to their strategy for growth and development, with a focus on administrative simplifications for business. The focus of the strategy for growth and development was on decentralization, deregulation, and support to market development and increased competition. The new ordinance on impact assessment introduced in 2007 also has a focus on simplification for business. Hence, as discussed by Radaelli (2010), Sweden does not have a national system in place requiring the use of RIA, or CBA, in policy making which is something that influences the planning process. It is contrary to the government's instructions on the use of economic analysis in the development of the regional transport investment plans and to the Swedish transport goal of ensuring economic efficiency and long-term sustainability of transport provision for citizens and enterprise throughout Sweden.

In their argumentation for decentralization of powers to the regional level, the government said that policy makers at this level have better knowledge of local conditions. OECD (2010), however, concludes that this level lacks the means to make assessments. This is a conclusion supported by the findings in the present study since it is obvious that the regional planners rely on the STA for quantified assessments of changes in the road transport system. For many possible measures, there is also a lack of necessary information about their possible impact, for example what influence investments in walking and biking paths can have on the propensity to travel by bicycle instead of car in different parts of the country. Hence, it appears to be a lack of knowledge among the actors working with growth and development, at both the national and regional levels, of what RIA is, how

it is done, and what information it can provide.²⁶ It is therefore not surprising that these impact assessment tools are not given more attention in the regional plans.²⁷

Another example of how the central government's focus on business development, and neglect of instructions on the use of CBA, influence the work at the regional level concerns the mining industry. According to the report from Norrbotten, the STA has been commissioned to evaluate investments in roads and railways in the region that would benefit the mining industry. A national strategy for a sustainable development of this industry was presented in 2013 (Ministry of Enterprise, Energy and Communication, 2013b) and a draft of a regional strategy developed by the County Administrative Boards in Västerbotten and Norrbotten was presented in 2014. In their *remiss* response to the regional strategy, the representative for the tourism industry, Swedish Lapland, says that the strategy lacks a discussion of the need for coordination and cooperation between different industries when evaluating investments (Swedish Lapland Tourism ekonomiska förening, 2014).

c) Neglect of the four-step principle

The Swedish NAO (2012), in their most recent audit of the government's work to maintain and develop the infrastructure, concludes that the government itself has not implemented the four-step principle that should be applied according to the government's own instructions on infrastructure planning. The reason for this is according to NAO possibly a lack of competence or resources at the government level on how to implement the principle in practice. The STA has provided information regarding the possibility to use different types of policy instruments in transport (Swedish Transport Administration 2012c), but what influence this has had on the decisions made by the government is not known. The Swedish NAO concludes that the deficiencies it has identified have important consequences for citizens. Firstly, they imply that taxpayers' money risks being used inefficiently. Secondly, deficiencies in the effectiveness of resource distribution may lead to deterioration in quality, which more specifically might give rise to deficiencies in punctuality and longer travel times, among other things.

Another reason for the principle not being implemented seems to be a lack of knowledge about the new planning practice at the STA. According to the government, the new strategic choice of measures method should be used as a basis for planning in order to implement the four-step principle. However, a closer inspection of a guide to planners on how to use the method reveals that it has a focus on the physical planning and the interaction with stakeholders at the local and regional level when investigating the need for changes in the transport system (Swedish Transport Administration, 2012b).²⁸ Hence, it mainly concerns planning related to step 3 and 4 measures.

²⁶ In a study on Norway, Odeck (1996) found that it was doubtful whether regional road agencies understood the principles of CBA.

²⁷ Another reason for this could be lack of understanding of the meaning of economic efficiency, which is the aim of CBA. According to Odhage (2012), the current approach to investment analysis that relies on CBA is considered to be efficient but not fair or just. This is quite opposite to the opinion of the OECD and other proponents of the use of this method and RIA, who argue for their use because it provides a possibility for a systematic and transparent description of consequences of different alternatives on the economy, the environment, and various groups in society.

²⁸ Odhage (2012 page 7) states, "The four steps principle is mainly used in a sequence, creating measures that are combinations of complements, and seldom used to find optional, alternative measures. For instance, one is never truly interested in finding and developing measures that reduce the need for transport but only for handling the consequences in initial steps before the much needed infrastructure is implemented. Can one expect anything different from a process that is run by the Transport Administration and concerns transport issues?" and concludes (page 8), "it is necessary that the process also treat problems from a causal perspective

Moreover, in the guide the role of the template *Samlad effektbedömning* is not very clear. This implies an obvious contradiction between the handbook and the instructions provided by the government that the investments, both single objects and the plan as a whole, should be based on such an analysis (Ministry of Enterprise, Energy and Communication, 2012a).

In its instructions, the government also expressed rather specifically to the STA that it is multimodal measures in physical transport *infrastructure* that are to be considered. This has influenced the decision making in the regions where the planners have chosen not to use funding for step 2 measures such as ITS, measures that can be used to influence transport demand.

d) Planning instructions imposing inefficiencies

In their evaluation of the recent planning process, Transport Analysis (2013) concludes: “The government instructions are very comprehensive and have most likely demanded much interpretation.” This is also the finding in the assessments presented in the previous section. Hence, the government’s requirements regarding the use of CBA and other planning tools in this process is unclear, as well as what type of measures that can be financed. Furthermore, although stating in the instructions that the needs differ across regions, the government has instructed all regions to pay special attention to investments in certain areas. One example is that the regional planners should focus on sustainable commuting. It is obvious that this has influenced the decisions made by the regional planners regarding investments in public transport. In many cases, improvements are made to support travel by bus and train in order to achieve regional enlargement. However, a consequence of this is that it is likely to reduce the possibility to travel by these modes to more distant tourism destinations since there is a capacity constraint on the railroads.

Another example is the government’s focus on biking paths.²⁹ A general implementation of this type of measure is most likely not cost-efficient given the varying conditions in the country. In Norrbotten, for example, there is no daylight during the winter months, which is an aspect that is likely to influence biking. Despite this, the regions have investigated the possibility to make such investments and have decided, with reference to information provided by the STA on where such measures are likely to be most efficient, on possible objects. There is an expressed hope in the regional plans that the money spent on these measures will contribute to a change in travel behavior, but there is no quantified data supporting this statement. The focus has mainly been on objects where commuting takes place and to a lesser extent on investments that may benefit tourists.

e) Regional differences, regionalization and Europeanization

As discussed by Stegman Mccallion (2007), in practice regionalization in Sweden appears to be a gradual change bringing regional (in)directly elected actors into the regional policy process but without implying a clear break with central state power. This finding is supported by more recent research on the Swedish governance system (Feltelius, 2016; Niklasson, 2016). Niklasson (2016, page 412) concludes that the role of the regions is unclear. According to Montin (2016), the areas of responsibility for the local and regional level are to a large extent regulated by national “framework legislation” combined with recommendations and instructions from national government agencies. There is also, according to Jacobsson and Sundström (2016), an important influence by activities at the EU level and international institutions such as the OECD.

to avoid the routine of handling the consequences of our transport system. This might be the spirit and soul purpose of the Strategic choice of measures”.

²⁹ The expectation that increased biking will make a significant contribution to sustainable transport is also reflected in priorities made in recent research funding; see for example (FFI, 2015).

The idea behind decentralization is that one size does not always fit all. In some cases, efficiency implies adaptation of measures to regional and local conditions; in other cases it does not. Regarding the environment, the reason for decentralization would be that the damaging effects and the costs to control the polluting activities vary. One question then is how the national level can design and create incentives in a decentralized system so that national policies are implemented efficiently. Another question, however, is how the government should account for differences in revenue-raising capacity or public service cost between regions.

From the maps in Figure 2, and the general characteristics in Table 1 regarding the studied regions, it is clear that there are considerable differences between the north and the south of Sweden. These are factors that will influence the outcome of an assessment of benefits and cost for a specific investments since the benefits are closely related to the number of users of a road. They are also factors that will affect the cost of providing public transport. This is a structural problem in the Swedish planning context that neither the government nor the STA seem to have addressed (cf. NAO, 2009). In Table 1, it is for example evident that the planning frame given to the regions is not related to factors such as length of the road network or population density. One reason is that in some regions EU funding complements the national funding as discussed in Niklasson (2013). Another reason however could be that the Swedish discussion on transport policy at the national level to a great extent has focused on sustainable urban areas and municipalities, possibly influenced by the discussion in the EU.³⁰ It was only recently, in 2013, that the STA together with other actors initiated a three-year project on transport planning for regional development.³¹

Discussion

In this paper we have used the most recent national transport investment plan in Sweden as the basis for a case study to analyze if and how the possible value conflict between tourism development and climate friendly travel is addressed in the multilevel governance system and the planning process. We have found that the Swedish planning system is highly fragmented and that it lacks what the OECD (2012) calls a whole-of-government approach to planning. There is a lack of coordination, communication, and cooperation as well as evidence-based decision making. The four regional transport investment plans in our case study show that the tourism industry is strongly dependent on car travel. With the ongoing improvement of the road transport system this is likely to continue. Hence, similar to the findings in other studies on sustainable tourism development (Hall, 2011; Farmaki, 2015; Haxton, 2015) we find that the question of how to make tourism travel more sustainable needs to be addressed at the national level, by the government, instead of a government agency such as the STA or the regions.

The reason for this conclusion is that policy measures that would influence emissions from road transport as well as transport patterns in an important way are in the hands of the government. This is for example the case for the practical implementation of the vision of a fossil-free vehicle fleet, and whether and how marginal cost pricing is to be implemented. Regarding international tourism, there is the question of airports. Here the STA has a role since it is responsible for providing grants to interregional public transport in sparsely populated areas with low demand. However, there is also the question of investing in new airport infrastructure that support the tourism industry. This is an

³⁰ It should be pointed out that Sweden by international standards has few urbanized areas. According to Swedish statistics an urbanized area can have as few as 200 inhabitants.

³¹ <http://www.trafikverket.se/denattraktivaregionen/>

issue similar to the questions raised in relation to the mining industry where the government did develop a strategy and also gave the STA instructions to plan for necessary investments.

Internationally there is a trend toward decentralization of power, which implies multilevel governance. The OECD (2013b), for example, argues that decentralization of the fiscal system can support growth. What is to be decentralized and how it should be done are empirical questions (Hysing and Olsson, 2011; OECD, 2013a). Regarding transport, there is for example a discussion in England about how to promote sound decision making when the selection and approval of funding for some transport schemes become the responsibility of local decision makers (Department of Transport, 2013). With decentralization, there is a risk of policy diffusion since, as discussed by Hysing and Olsson (2011) and Sundström (2005), in such a system there is room for individuals to influence policy formation and implementation. Delegation of policy making may be especially problematic in relation to environmental issues where there is a need for an understanding of complex natural relationships, assessments of uncertainties, coordination between different policy areas, and adherence to international policy (Taylor et al., 2013). Since decentralization has been a process in Sweden for 20 years, the functioning of the Swedish governance system is interesting to study. Our conclusion, based on the findings in this paper, is that governments need to be aware that decentralization and regionalization are not solutions to the difficult question on how to achieve a long-term sustainable transport system in an efficient way.

As suggested by the OECD as well as the NAO, we find that there is a need for more strategic planning at the national level in Sweden. The current planning system is the result of tradition and of a process of decentralization that started in the 1990s. It is also influenced by the EQOs and the Vision Zero policy adopted by the parliament in the end of the 1990s. Our conclusion is that these objectives, as well as the changes made to the Swedish planning system, have all been implemented with good intentions. So far however the conflicts that the current system creates have been handed down from the national government for other actors to handle with best wishes, hence without guidance on how they should be dealt with. The outcome is a fragmented system where individual actors have much room for maneuver. An example is the Vision Zero, which according to our analysis has an important influence on transport investments in practice. The current work within the STA, with an established governance system and an extensive network, can be seen as a successful outcome of the Swedish cooperative approach to planning. However, there is a need to be aware that this type of close collaboration, with many influential actors speaking with one voice, may make it hard for others to raise their voices and disagree (Sunstein, 2000)³². There appears to be a lack of information on the cost of implementation of this policy, and of unintended consequences, which is a problem.

In the scientific literature arguments are raised for the use of decision making based on assessments of benefits and costs particularly in situations involving environmental or other risks (Sunstein, 2000; Sunstein, 2003; Hahn and Sunstein, 2005). According to Sunstein (2000), there is a need for this type of structured analysis since it is cognitively demanding to assess risks and the consequences of policy interventions in complex systems. Furthermore, policy makers need to make a more explicit analysis of the trade-offs involved in a particular situation, since it is difficult to make a general assessment of the cost of providing a certain level of safety. The need for making this kind of analysis when establishing goals and designing policy measures has also been raised by researchers in Sweden in recent years (Brännlund, 2008; Kriström and Bergman, 2014; Hansson, Edvardsson Björnberg and Vredin Johansson, 2015). The need for assessments of benefits and cost of policy making is also why

³² See the discussion on Aggravating Social Influences: Informational and Reputational Cascades.

the EU has established an agenda for regulatory reform in the member states with RIA as an important tool (European Commission, 2015). How the member states have adopted this tool has been investigated by Radaelli (2010) and De Francesco et al. (2011).

The results in this study support the finding by Radaelli (2010) that the full RIA process is not implemented in Sweden. Reasons for this are factors related to the political system and its traditions³³. As discussed in for example Sverdrup (2004) and Hilding-Rydevik et al. (2011), the Swedish policy formation is based on consultation with collaboration and consensus as important principles. Current policy making relies on assessments through what is called a *remiss* procedure³⁴ (Hysing, 2014). It allows for organized interests, and in some cases civil society, to comment on various kinds of plans and proposals at the local, regional, and national levels. That Sweden has this tradition appears to be an important explanation for why RIA has not been fully implemented (Radaelli, 2010). According to Löfstedt (2004) the Swedish attitude to RIA when it was introduced in the EU was that it was an important tool to make the decision making *in the EU* more transparent.

However, from our description of RIA it is evident that enabling transparent decision making is only one reason for its use. As important is the need for a systematic analysis of the impacts of policy making in complex system and for the government to assess the performance of the governance system. The Swedish government has not established the institutions that the OECD consider necessary to support the use of this tool. Therefore, there is currently a lack knowledge and established procedures in the Swedish governance system on how to perform this type of analysis. As discussed in this paper, it is therefore difficult to evaluate the performance of the current transport investments planning process and to what extent it contributes to goals such as sustainable tourism development. More importantly however it means that Sweden may not develop the skills and arguments necessary for influencing the negotiations at the EU level that is now an integral part of policy making. This in turn may result in Sweden having to implement inefficient and costly policy measures. There appears to be a risk since the Swedish state, according to Jacobsson and Sundström (2016), more than before can be described as a rule-following entity as a consequence of the integration in the broader European and global environment.

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³³ Regarding the environment, there are well established routines at all policy levels for making assessments of the state of the environment while less has been done on the understanding of cause and effect relationships and the development of impact assessments (Swedish Agency for Public Management, 2012; Kriström and Bergman, 2014; OECD, 2015).

³⁴ The Swedish government calls this a referral process; see <http://www.government.se/how-sweden-is-governed/swedish-legislation---how-laws-are-made/> (accessed 2015-11-13).

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Appendix 1:

Planned investments in the county of Norrbotten, Jämtland, Dalarna and Kalmar in 2015 (week 52).

Unmarked objects are new investments (78).

Blue marked objects are maintenance (28).

Red marked objects are reconstructions due to risks related to the construction (12).

Green marked objects are projects in municipalities (9).

Yellow marked objects are bridges (12).

In the column *Varför* (why) are the stated motives for the project given on the web-page where *Trafiksäkerhet* means Traffic safety (78) and *Framkomlighet* means Accessibility (33).

Nummer	Län	Projekt (v52)	Pågående projekt TRV beteckning	Vad (korta fakta)	Varför (korta fakta)
1	Norrbotten	1	E10 Avvakko - Lappeasuando	Mötesfri väg	Trafiksäkerhet och framkomlighet
2	Norrbotten	2	E10 Kulleribacken, stigningsfält	Stigningsfält	Trafiksäkerhet och framkomlighet
3	Norrbotten	3	E10, Bro över Grundträskån och Kälvan	Bredda bro	Trafiksäkerhet
4	Norrbotten	4	E10, Mertainen-Pitkäjärvi	Väggårdar	Anpassning ökad gruvtrafik
5	Norrbotten	5	E10, Morjärv - Västra Svartbyn	Mötesfri väg	Trafiksäkerhet och framkomlighet
6	Norrbotten	6	E10, Muorjevaarabackarna	Ny väg	Trafiksäkerhet och framkomlighet
7	Norrbotten	7	E10, Skaulo, gång- och cykelväg	GC-väg	Trafiksäkerhet
8	Norrbotten	8	E4, Trafikplats Ersnäs	Planskild trafikplats	Minska barriäreffekt, trafiksäkerhet, framkomlighet
9	Norrbotten	9	E4, Boviken-Rosvik	Mötesfri väg	Trafiksäkerhet och framkomlighet
10	Norrbotten	10	E4, Börjeslandet	Mötesfri väg	Trafiksäkerhet och framkomlighet
11	Norrbotten	11	E4, Alån - Antnäs	GC-väg	Trafiksäkerhet
12	Norrbotten	12	E4, Kalix - Lappbacken	Mötesfri väg	Trafiksäkerhet och framkomlighet
13	Norrbotten	13	E4, Kalix - Töre	Mötesfri väg	Trafiksäkerhet och framkomlighet
14	Norrbotten	14	E4, Kinnbäck-Jävve	Mötesfri väg	Trafiksäkerhet
15	Norrbotten	15	E4, Salmis-Haparanda	Mötesfri väg	Trafiksäkerhet och framkomlighet
16	Norrbotten	16	E4, Trafikplats Hortlax	Trafikplats	Minskad genomfartstrafik
17	Norrbotten	17	E45 Kåbdalis	GC-väg	Trafiksäkerhet
18	Norrbotten	18	E45, Bro över Lina älv	Bredda bro	Framkomlighet
19	Norrbotten	19	Kirunaprojektet		
20	Norrbotten	20	Lavinbekämpning Abisko		
21	Norrbotten	21	Malmtransporter Kaunisvaara-Svappavaara		
22	Norrbotten	22	Pajala, tätortsupprustning		Tillgänglighet och trafiksäkerhet
23	Norrbotten	23	Väg 356, Bjurå-Avafors	Bärighetsåtgärder	
24	Norrbotten	24	Väg 356, Åskogen-Degersalet	Bärighetsåtgärder	
25	Norrbotten	25	Väg 373, bro Gäddträskån	Ny bro	Trafiksäkerhet och framkomlighet
26	Norrbotten	26	Väg 373, E4-Svensbyn	Mötesfri och gc-väg	Trafiksäkerhet och framkomlighet
27	Norrbotten	27	Väg 373, förbifart Stockbacken	Ny förbifart	Trafiksäkerhet och framkomlighet
28	Norrbotten	28	Väg 392, Åbergsmyrn	Släntförstärkning	Säkra väg mot ras och skred
29	Norrbotten	29	Väg 394, Mettä-Dokkas	GC-väg	Trafiksäkerhet och tillgänglighet
30	Norrbotten	30	Väg 501/503 Blåsmark	GC-väg	Tillgänglighet och trafiksäkerhet
31	Norrbotten	31	Väg 503 Hortlax	GC-väg	Trafiksäkerhet och tillgänglighet
32	Norrbotten	32	Väg 543, Nygård-Åtråsk	Bärighetsåtgärder	Behov planerad vindkraftspark
33	Norrbotten	33	Väg 545, Storsund-Korstråsk	Förbättringsåtgärder	Framkomlighet och bärighetsklass tunga fordon
34	Norrbotten	34	Väg 546, Tällträsk	bärighetsåtgärder	Framkomlighet
35	Norrbotten	35	Väg 580, kallax-Bergnåset	GC-väg	Trafiksäkerhet
36	Norrbotten	36	Väg 582, Alvik Långnäs	GC-väg	Trafiksäkerhet
37	Norrbotten	37	Väg 588, Åberstorp-Sävast	GC-väg	Trafiksäkerhet
38	Norrbotten	38	Väg 597, Björnsbyn	GC-väg	Trafiksäkerhet
39	Norrbotten	39	Väg 664, Nystrand	Ny väg	Undvika risk för skred
40	Norrbotten	40	Väg 685, Vibbyn-Skogså	Bärighetsåtgärder	
41	Norrbotten	41	Väg 700, Kosjärvi-Bondersbyn	Bärighetsåtgärder	
42	Norrbotten	42	Väg 705 Grynäs-Ytterbyn	GC-väg	Trafiksäkerhet och tillgänglighet
43	Norrbotten	43	Väg 705, Målsön-Storön	Vägförstärkning	Framkomlighet och Trafiksäkerhet
44	Norrbotten	44	Väg 706, Töre	Tätortsupprustning	Tillgänglighet och trafiksäkerhet
45	Norrbotten	45	Väg 707, Ryssbält-Pålänge	Bärighetsåtgärder	
46	Norrbotten	46	Väg 707, Ytterbyn-Ryssbält	Bärighetsåtgärder	
47	Norrbotten	47	Väg 708, Ytterbyn-Målsön	Bärighetsåtgärder	
48	Norrbotten	48	Väg 720, Kalix-Björkfors	Bärighetsåtgärder	
49	Norrbotten	49	Väg 721, Gammelgården	Riskreducerande åtgärd	
50	Norrbotten	50	Väg 729, Keräsjöki	Riskreducerande åtgärd	
51	Norrbotten	51	Väg 805, Kvikkjokk-Vaikijaur	Bärighetsåtgärder	
52	Norrbotten	52	Väg 810, Vuollerim	Riskreducerande åtgärd	
53	Norrbotten	53	Väg 811, Kuouka-Messaure	Riskreducerande åtgärd	
54	Norrbotten	54	Väg 818, Kilvo-Mukkavaara	Bärighetsåtgärder	
55	Norrbotten	55	Väg 822, Kilvo-Gällivare	Bärighetsåtgärder	
56	Norrbotten	56	Väg 841, Haapakylä-Kivijärvi	Bärighetsåtgärder	
57	Norrbotten	57	Väg 95 Kraja, Industrivägen	GC-väg	Trafiksäkerhet
58	Norrbotten	58	Väg 94 Älvsbyn-Korstråsk	GC-väg	Trafiksäkerhet och tillgänglighet
59	Norrbotten	59	väg 968/616 Gäddvik	Cirkulationsplats	Trafiksäkerhet och tillgänglighet
60	Norrbotten	60	Väg 97, Travbaneleden	Cirkulationsplats	Trafiksäkerhet
61	Norrbotten	61	Väg 97, Luleå - boden	Mötesfri väg	Trafiksäkerhet och framkomlighet
62	Norrbotten	62	Väg 98, bro över Torne älv	Ny bro	Trafiksäkerhet och framkomlighet
63	Norrbotten	63	Väg 99, Hedenåset	GC-väg	Trafiksäkerhet och framkomlighet
64	Norrbotten	64	Väg 99, Kuivankangas	Riskreducerande åtgärd	

Appendix 1:

Planned investments in the county of Norrbotten, Jämtland, Dalarna and Kalmar in 2015 (week 52).

65	Kalmar	1	E22 genom Kalmar län	Motorväg och mötesfri väg	Trafiksäkerhet och framkomlighet
66	Kalmar	2	Väg 136, förbi Färjestaden	Ny väg	Framkomlighet och Trafiksäkerhet
67	Kalmar	3	Väg 136, Algutsrum	Knutpunkt för bussresenärer	Trafiksäkerhet
68	Kalmar	4	Väg 136, Ekerum	Ombyggnad korsning	Framkomlighet
69	Kalmar	5	Väg 136, Rälla-Borgholm	Mötesfri väg och GC	Trafiksäkerhet och framkomlighet
70	Kalmar	6	Väg 137, Ölandsbron	Underhåll	
71	Kalmar	7	Väg 23, Mållilla-Hultsfred	Mötesfri väg	Trafiksäkerhet och framkomlighet
72	Kalmar	8	Väg 31, Tikaskriv	Minska risk	Skydd vattentäkt
73	Kalmar	9	Väg 34, Staby	Minska risk	Skydd vattentäkt
74	Kalmar	10	Väg 570 Bottorp	Minska risk	Skydd vattentäkt
75	Kalmar	11	Väg 782, Toverum-Kungsholm	Renovera Bro	
76	Kalmar	12	Väg 874, Loftahammar - Hulta	Ny bro	
77	Jämtland	1	E14, Brunflo (Grytan)	GC-väg	Trafiksäkerhet
78	Jämtland	2	Bro Nästsjöbacken vid Rännön	Bro	
79	Jämtland	3	Bro över Mårtjärnsbacken	Bro	
80	Jämtland	4	Väg 689, Trumma över Häggsjöån	Bro	
81	Jämtland	5	Väg 989, bro över Bersjöån	Bro	
82	Jämtland	6	E14, Järpen-Åre	Stigningsfält	Trafiksäkerhet och framkomlighet
83	Jämtland	7	E14, Vik-Frönäset	GC-väg	Tillgänglighet och trafiksäkerhet
84	Jämtland	8	E14/E45, Brunflo	Förbifart och GC-väg	Trafiksäkerhet och tillgänglighet
85	Jämtland	9	E45 Sveg, sträckan Rengsjön-Ålvros	Ny sträckning	Miljö, trafiksäkerhet och kortare resväg
86	Jämtland	10	Rastplatser längs E45	Nybyggnad	Bättre möjlighet till stopp och raster
87	Jämtland	11	Väg 315, genom Rätan	GC-väg	Trafiksäkerhet
88	Jämtland	12	Väg 315, genom Vemdalen by	GC-väg	Trafiksäkerhet och tillgänglighet
89	Jämtland	13	Väg 315, Uanbergsvallarna-Rätan	Förbättringsåtgärder	Trafiksäkerhet och framkomlighet
90	Jämtland	14	Väg 321, Gärdsta	GC-väg	Förbättra trafiksituation för gående och cyklist
91	Jämtland	15	Väg 321, Svenstavik-Månsåsen	Bärighet och GC-väg	Trafiksäkerhet
92	Jämtland	16	Väg 345, Strömsund-Ulriksfors	GC-väg	Tillgänglighet och trafiksäkerhet
93	Jämtland	17	Väg 580, Myrviken-Fröjdholmen	GC-väg	Trafiksäkerhet
94	Jämtland	18	Väg 592, Fillsta-Målstå	GC-väg	Förbättra trafiksituation för gående och cyklist
95	Jämtland	19	Väg 592, genom Hara	GC-väg	Förbättra trafiksituation för gående och cyklist
96	Jämtland	20	Väg 593, genom Hackås	GC-väg	Förbättra trafiksituation för gående och cyklist
97	Jämtland	21	Väg 604, Slandrom-Vallsundsbron	GC-väg	Förbättra trafiksituation för gående och cyklist
98	Jämtland	22	Väg 609/614, Rödön	GC-väg	Trafiksäkerhet
99	Jämtland	23	Väg 610, Torsta-Ösbacken	GC-väg	Förbättra trafiksituation för gående och cyklist
100	Jämtland	24	Väg 611, Krokom-Dvärsätt	GC-väg	Förbättra trafiksituation för gående och cyklist
101	Jämtland	25	Väg 638, Ullån-Duved	GC-väg	Trafiksäkerhet
102	Jämtland	26	Väg 659, Såå-Vik	Förstärkningsåtgärder	
103	Jämtland	27	Väg 662, Bonåshamn-Huså	Bärigheten	Framkomlighet
104	Jämtland	28	Väg 675, Valne-Ånge	Förstärkningsåtgärder	
105	Jämtland	29	Väg 711, Bräcke-Albacken	Förstärkningsåtgärder	
106	Jämtland	30	Väg 796, Bro över Indalsälven i Lit	Bro	
107	Jämtland	31	Väg 829, Lövsberga-Alanäs	Förstärkningsåtgärder	
108	Jämtland	32	Väg 84, Hede	GC-väg	Trafiksäkerhet
109	Jämtland	33	Väg 84, Kårböle-Funåsdalen	Hastighetshöjande åtgärder	Bibehålla Trafiksäkerhet
110	Jämtland	34	Väg 87, Stugun	GC-väg	Trafiksäkerhet
111	Jämtland	35	Väg 87/233, Hammarstrand	GC-väg	Trafiksäkerhet
112	Jämtland	36	Väg 776/969 omläggning vid Björkhöjden	Riskreducerande åtgärd	
113	Dalarna	1	E16, Dala Järna - Vansbro	Ny väg	Trafiksäkerhet och tillgänglighet
114	Dalarna	2	E16, Lönnemossa-Klingvägen	Mitträcke	Framkomlighet och trafiksäkerhet
115	Dalarna	3	E16, Yttermalung	Ny väg	Trafiksäkerhet och framkomlighet
116	Dalarna	4	E16, /väg 70, Borlänge-Djurås	Mötesfri väg	Trafiksäkerhet
117	Dalarna	5	E45, Vattnäs - Trunna	Ny väg	Trafiksäkerhet och framkomlighet
118	Dalarna	6	E45/väg70, Mora	Kapacitetshöjning	Trafiksäkerhet, framkomlighet, tillgänglighet
119	Dalarna	7	Riksväg 55/60, Ludvika	Cirkulationsplats	
120	Dalarna	8	Väg 1000, Fryksåsvägen - Lillågatan	Trafiksäkerhetshöjande åtgärder	Trafiksäkerhet
121	Dalarna	9	Väg 1024/1025, Vasaloppsvägen	Bärighetsåtgärder	
122	Dalarna	10	Väg 1029, Jöllen - länsgränsen mot Jämtland	Ombyggnad	
123	Dalarna	11	Väg 1053, Flygplatsvägen Sälen	Ny väg	Möjliggöra flygplats
124	Dalarna	12	Väg 301, Furudal	GC-väg	Trafiksäkerhet
125	Dalarna	13	Väg 50, Enviken	Ombyggnad av korsning	Trafiksäkerhet
126	Dalarna	14	Väg 50, Skeppmora-Lyviksberget	GC-väg	Trafiksäkerhet
127	Dalarna	15	Väg 595, Gagnefs kyrkby - Gagnefs resecentrum	GC-väg	Trafiksäkerhet
128	Dalarna	16	Väg 635, Halvarsgårdarna, Grevbo, Tolsbo, Sellnäs	Trafiksäkerhetshöjande åtgärder	Trafiksäkerhet
129	Dalarna	17	Väg 650, Åsmansbo	Trafiksäkerhetshöjande åtgärder	Trafiksäkerhet
130	Dalarna	18	Väg 66, Ludvika	Cirkulationsplats	Framkomlighet och trafiksäkerhet
131	Dalarna	19	Väg 66, Östra Tandö-Bu	Trafiksäkerhetshöjande åtgärder	Trafiksäkerhet
132	Dalarna	20	Väg 662, Murbo-Spraxkya-Rågåker	Bärighetsåtgärder	
133	Dalarna	21	Väg 68, Fors	Ny väg	Anpassning industri
134	Dalarna	22	Väg 70, Rommeholen-Gyllehemsvägen	Mötesfri väg	Framkomlighet och trafiksäkerhet
135	Dalarna	23	Väg 70, Särnaleden-Idre	Bärighetsåtgärder	
136	Dalarna	24	Väg 764, Svinöhed-Stjärnsund-länsgränsen	Bärighet och rensning sidområden	Bärighet och trafiksäkerhet
137	Dalarna	25	Väg 800, Torsång	Byte av broar	
138	Dalarna	26	Väg 850/862, Östborn	Ombyggnad korsning	Trafiksäkerhet
139	Dalarna	27	Väg 938, Västanvik-Karlsarvet	GC-väg	Trafiksäkerhet och tillgänglighet

Appendix 2:

CBA information presented by the STA for objects in the regional plans (week 52, 2015)

Objekt nr	Län	SEB	LTP	Namn	Motivstyrseg	Åtgärdsstyrseg	Datum	Anläggningskostnad	restid	DSS	Utsläpp	Investering	Nettonvärde	Kalkylperiod	Byggtid	Åtgärdsad vägslängd	ÅDT
vn_072	1	1	1	1 LV373 förbi Stordäcken	Omlada trafik, högre hastighet	4	130610	40000000	3	-6	-1	-55	-64	40	1	3	660
vn_075	1	1	1	1 LV373 Svensbyn-E4	Trafiksäkerhet och högre hastighet	3 och 4	130704	54200000	24	41	-1	-66	-10	40	1	9	3416
vs_092	4	1	1	1 RV136 förbi Glömminge	Trafiksäkerhet och ökad tillgänglighet	3 och 4	130603	96000000	124	65	-9	-115	49	60	2	7	7300
vn_004	2	1	1	1 Väg 66 länsgräns-Smedjebacken	Trafiksäkerhet	3	130702	112000000	101	128	-5	-133	43	60	2	4	4100
vn_022	2	1	1	1 Väg 71 Östra Tandö - Bu	Trafiksäkerhet och ökad tillgänglighet	3	130704	145000000	38	22	-1	-173	-109	60	2	7	max 9000
vn_006	2	1	1	1 Väg 68 förbi Fors	Fläta väg och frigöra mark för industri	4	130702	147800000	-65	-32	-5	-177	-286	60	2	8	10000
vn_059	3	1	1	1 E14 Förlbi Brunflo	Trafiksäkerhet och ökad tillgänglighet	3	130315	150000000	417	68	-4	-176	283	60	3	8	10000
vn_076	1	1	1	1 RV97 etapp 1 RV - Tranbaneleden	Trafiksäkerhet och ökad tillgänglighet	3 och 4	130620	161700000	-24	18	-3	-190	-201	40	3	10	2040
vn_012	2	1	1	1 E16 förbi Årtermalung	Trafiksäkerhet och framkomlighet	4	130630	190000000	187	46	1	-223	-16	60	3	10	2040
vs_063	2	1	1	1 Väg 1024/1025 Vassaloppsvägen	Trafiksäkerhet och framkomlighet	3	130705	194000000	25	26	2	-228	-205	40	3	40	690
vn_073	2	1	1	1 RV45/70 Mora steg 1-3	Trafiksäkerhet och ökad tillgänglighet	3	130315	238000000	..	..	..	..	..	..	..	4	18000
vn_086	1	1	1	1 RV50 genom Ludvika	Trafiksäkerhet och väglösning	3	130315	287000000	104	56	-23	-343	-209	40	2	7	..
vn_087	1	1	1	0 LV372 cirkulär plats Östra Leden	Trafiksäkerhet och väglösning	3	130520	233000000	-87	75	-3	-28	-44	40	1	..	8300
vn_055	1	1	1	0 E10 Anvåkar - Skaulo	Trafiksäkerhet och framkomlighet	3	130520	245000000	-87	66	-3	-30	-54	40	1	..	8300
vn_062	2	1	1	0 RV70 Smedjebacksvägen - Gyllebensv	Trafiksäkerhet och framkomlighet	3	130430	715000000	57	41	-2	-87	-49	60	1	18	1300
vn_012	1	1	1	0 E4 Ljusvattnet - Yttervik	Trafiksäkerhet och framkomlighet	3	141202	107700000	127	88	-4	-133	67	60	2	2	15000
vn_007	2	1	1	0 RV70 Smedjebacksvägen	Trafiksäkerhet och framkomlighet	3	130426	119700000	185	15	-7	-143	26	60	2	7,7	6570
vn_008	1	1	1	0 E4 Sikeå-Gumboda	Trafiksäkerhet och framkomlighet	3	141212	129500000	387	83	10	-153	320	60	2	2	max 15460
vn_001	2	1	1	0 E45 Vaiträs - Trunna	Trafiksäkerhet och framkomlighet	3	130429	152800000	137	32	-6	-183	-51	60	2	10	3490
vn_010	2	1	1	0 E16 Dala Järna - Vansbro	Trafiksäkerhet och ökad tillgänglighet	3 och 4	130429	161000000	378	92	0	-192	265	..	..	7	6500
vn_066	2	1	1	0 RV70 Borlänge-Djursås	Trafiksäkerhet och ökad tillgänglighet	3	130429	200000000	447	84	35	-226	331	60	3	9	3580
vn_077	1	1	1	0 RV97 Sunderbyn - Sävast	Trafiksäkerhet och framkomlighet	3	130626	231000000	130	194	-6	-235	193	60	3	11	10400
vn_011	1	1	1	0 E4 Broånge-Ljusvattnet	Trafiksäkerhet och framkomlighet	3	130428	253900000	342	61	-12	-298	35	60	3	20	3810
vn_009	1	1	1	0 E4 Gumboda - Grimsmark	Trafiksäkerhet och framkomlighet	3	130429	186400000	185	31	-8	-219	-43	60	3	14,6	4000

Län 1 = Norrbotten, Län 2 = Dalarna, Län 3 = Jämtland, Län 4 = Kalmar

The column Nettonvärde = Net present value