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The impact of changed structural conditions on regional sustainable mobility planning in Norway

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Abstract

A primary impediment in achieving sustainable mobility objectives is the multi-level and cross-sectoral nature of land-use and transport planning. This paper investigates whether changes in structural conditions have affected the ability of Norwegian regional authorities to succeed in sustainable mobility planning. The effects of the changes were minor, as the national government acted in ways that undermined the power of regional authorities. By analysing the fine-grained inter-agency dynamics, this study contributes richer and more nuanced theoretical understandings of the challenges involved in sustainable transport planning. The new insights could assist discussions in many countries on how land-use and transport planning can be organized to facilitate more sustainable mobility patterns.

1. Introduction

1.1 Background

Stopping traffic growth and reducing greenhouse gas emissions (GHG) from transport are long-held objectives in many countries and cities, but have proved difficult to achieve (European Environment Agency, 2016, Norwegian Environment Agency, 2015). The main strategy has been to coordinate and steer land-use and transport developments in directions contributing to reduced transport demand and to changing the modal split towards less car-use (Banister, 2008; Ministry of Local Government and Modernisation, 2011, 2015; UN Habitat, 2013). Land-use and transport developments are to a large degree steered by public authorities – at least in most European countries (Owens & Cowell, 2002). ‘Steering’ is done through planning and decision processes under a planning and building act (PBA) (Ministry of Local Government and Modernisation, 2008a), and through (mainly) public planning, funding and implementation of transport infrastructure and public transport services. It might therefore be expected that coordinating and steering land-use and transport developments in directions contributing to defined objectives ought to be manageable.

This is not the case, however, and one explanation is the multi-level and cross-sectoral nature of such processes. Private actors and public authorities at all levels may initiate plans and projects. In Norway, as in many other European countries, responsibilities in relation to planning land-use and transport development are split at national, regional and municipal administrative/political levels (Higdem & Hanssen, 2014). *National level* prepares laws, white papers, regulations, policy guidelines, and other documents, to influence practice at lower levels. If formal objections are raised

to a planning proposal by central government, regional bodies or municipalities, it is the Ministry of Local Government and Modernisation that determines whether the plan can be adopted or not. National agencies are responsible: for planning, financing and implementing large transport infrastructure projects; for maintenance of railways and national roads; and for railway services. Responsibilities for land-use planning and decision-making clearly lie at the *municipal level*, as do responsibilities for municipal transport infrastructure. *Regional authorities*, the 19 counties (with elected politicians) in Norway, are responsible for regional roads and for local and regional public transport. They draw up regional master plans that “... *form the basis for the activities of regional bodies and for municipal and central government planning and activities in the region*” (PBA, chapter 8). This gives counties an important role as coordinators across levels, sectors and municipal borders, not least with respect to land-use and transport planning, and much in line with other Nordic countries (Baldersheim, Sandberg, Ståhlberg & Øgård, 2001; Higdem & Hanssen, 2014). Real and fundamental conflicts are often embedded in such processes; stakes may be high, and, while some actors will gain, others will lose whatever decision is made (Flyvbjerg, 1998). Land-use and transport planning processes can therefore be understood as multi-level and cross-sectoral arenas for battles, conflict resolution, priority-setting and decision-making, which does not necessarily mean arriving at consensus. Coordinating and steering these processes towards defined objectives is demanding.

Lack of goal-achievement has (partly) been explained as resulting from the complex and fragmented organization of land-use and transport planning, embedded goal conflicts in such processes, and the lack of a power or institution that can coordinate

organizations and steer towards defined objectives (Bryson, Crosby & Stone, 2015; Hanssen, Mydske & Dahle, 2013; Hull, 2005, 2008; Stead & Meijers, 2009). If this is the case, goal-achievement would improve if the structural conditions for regional steering and coordination were changed. It could be argued that the socialist–green Norwegian Government did this when in 2008 it revised the PBA and included stronger tools (paragraphs) for regional steering and coordination of land-use development. Further, eighty per cent of national roads were transferred from national level to counties in 2010 (Ministry of Municipal and Regional Affairs, 2007).

. More policy tools gathered at the regional level were intended to strengthen the ability of regional authorities to (among other things) coordinate and steer land-use and transport planning. We considered this to be an interesting case to study, and therefore set about finding out how changes in structural conditions affected the ability of regional authorities to coordinate and steer land-use and transport planning in directions contributing to plans of a higher goal achievement potential.

Since this research was initiated in 2012, two events in particular have made the issues we investigate here even more relevant. *First*, in 2012 the Norwegian Parliament presented its climate agreement stating that increasing transport demand caused by strong population growth in the largest Norwegian cities was not to bring about growth in road traffic volumes (Ministry of Local Government and Modernisation, 2012), later known as *the zero-growth objective*. In addition, the National transport plan (Ministry of Transport and Communications, 2013, 2017) has the zero-growth objective high on its agenda. *Second*, understanding regional planning as a tool that achieves important and cross-cutting objectives has been receiving

increasing acceptance (Higdem & Hanssen, 2014). Although still weaker and more dependent on state resources than it is in other European countries (Mydske, 2006), the role of Norwegian counties in recent decades has become that of a stronger facilitator and coordinator of regional development (Normann & Isaksen, 2009; Selstad & Onsager, 2004). In April 2016, the current right-wing Government presented a White Paper suggesting changes to institutional organization, roles and responsibilities at the regional level, with an increased focus on the importance of regional planning (Ministry of Local Government and Modernisation, 2016). In this regard, two subsequent governments of opposite political colour have stated that the regional level should be given more responsibilities and more of a leadership role in regional development.

1.2 Aim and research questions

Previous research has documented the importance of and challenges related to coordination and integration across sectors and levels in land-use and transport planning (Antonson, Isaksson, Storbjörk & Hjerpe, 2016; Hanssen et al., 2013; Higdem & Hanssen, 2014; Hull, 2005; Stead & Meijers, 2009). Studies are often focused on national–local level (Aall, 2012; Hull, 2008; Næss, Bang, Eriksen & Vevatne, 2005) or regional–local level (Antonson et al., 2016; Hrelja, Monios, Rye, Isakson & Scholten, 2017). An aim of this article is to contribute to a deeper and more nuanced understanding of how *regional authorities* comprehend and utilize their coordinating and integrative role across sectors (land-use and transport planning) and levels (national, regional, municipal); how changes in structural conditions affect this;

how they influence goal conflicts and planning processes; and the goal achievement potential of plans.

The article is organized to answer the following research questions: (i) What are the most prominent goal conflicts negatively affecting the steering of land-use and transport developments in directions that lead to stopping traffic growth, and how do regional planning authorities manage these conflicts in planning processes? (ii) How have stronger tools in the PBA and increased responsibilities in relation to roads affected the ability of regional authorities to coordinate and steer land-use and transport planning in desired directions? Based on our findings, we discuss the effects of structural conditions on the fine-grained inter-agency dynamics in planning processes, and how this influences the resulting plans.

2. Theoretical framework

Focusing on how regional authorities steer through coordination, we make the conditions for coordinated and integrated planning the basis on which we define our theoretical framework. We focus on conditions related to objectives, knowledge and power in planning processes as explanatory factors. Since our research concerns changes in structural conditions, and how these affect the interplay between actors, we also support our analyses with simple agency-structure theory.

2.1 Structures and agencies

Starting with the latter, we relate to Bhaskar's (1993) notion of societal structures and agencies being separate entities that interplay and, over time, change and affect each

other (Danermark, Ekström, Jakobsen & Karlsson, 1997). The most relevant societal structure in our research is the organization of responsibilities and powers for steering land-use and transport planning and development. The PBA is an important part of this structure, defining the rules for planning and decision-making concerning land-use. The main agencies we study are the public organizations involved in regional land-use and transport planning; the relevant national, regional and municipal authorities. Understood in this way, our research concerns how changes in societal structure (stronger tools in the PBA and increased road responsibilities) affect the interplay between the most relevant agencies, the mechanisms that are activated in these processes, and how this affects the goal achievement of plans.

2.2 Objectives, knowledge and power in planning processes

Turning to the literature on coordinated or integrated planning, we find that planning systems (of the PBA kind) are increasingly being seen as mechanisms towards achieving policy integration and goal achievement across Europe (Stead & Meijers, 2009; Hull, 2005; Owens & Cowell, 2002). This is a response to the emergence of new, cross-cutting and complex problems that require fragmented organizations to coordinate or integrate their actions (Antonson et al., 2016; Bryson et al., 2015; Hrelja, 2015; Hull, 2005; Hurlimann & March, 2012; Stead & Meijers, 2009). Goal conflicts are embedded naturally in these processes, and the actors may have different understandings and knowledge concerning what the problems are and how they could or should be resolved. Often, there will not be an institution that has the legitimacy or power to coordinate and steer towards defined objectives, and this could result in power vacuums and/or conflicts. In such situations, spatial planning

can have a dual role (Stead & Meijers, 2009): one role defining an overarching framework for the integration of sectoral policies, giving room for communication between sectors and/or developing common planning concepts, understandings and goals; the other role being objective-setting, where long-term visions in spatial plans could be a key way of affecting the allocation of resources in different sectors, and moderating “*political short-termism in public policy-making*” (Stead & Meijers, 2009, p. 329). Throughout this literature, objectives/goal conflicts, knowledge/understandings and power stand out as key issues. We chose to focus on these as potential explanatory factors.

Agreement on *objectives* is understood as an important factor explaining the successful implementation of projects or strategies (Bryson et al., 2015; Offerdahl, 2005). Goal conflicts are embedded naturally in many planning processes (Flyvbjerg, 1998) and spatial planning has the potential to forge agreements about common interests and goals across policy sectors (Hurlimann & March, 2012; Stead & Meijers, 2009). Goals are not simply given, they need to be understood as “*practical and political problems to be formulated, reinterpreted, continually re-evaluated and reconstructed*” (Forester, 1989, p. 19).

Schön (1983) discusses the processes of *problem-setting* in plan-making, where planners more or less consciously stress some issues and downplay others, clarify some alternatives and obscure others. The objectives held or safeguarded by various actors are the main reasons they contribute to planning processes, and the existence of objectives may be understood as a main cause of planning processes being initiated. How objectives are prioritised in these processes will affect the plan-making and the plans, since efforts will be focused on arriving at solutions contributing to the most

prominent objective(s) being achieved. Hence, conflicts in planning processes often concern prioritisation of conflicting goals.

Objectives, knowledge and power are reciprocally interrelated, as illustrated in Figure 1. What are defined as key objectives will affect what knowledge is understood as relevant and valid, since knowledge concerning how these objectives are achieved will be emphasized. Objectives will also affect the power balance between the actors, where those more relevant in achieving defined objectives become more powerful. Objectives, knowledge and power affect one another, the planning processes, and hence the plans and developments being the outcome of the processes (Tennøy, 2012a).

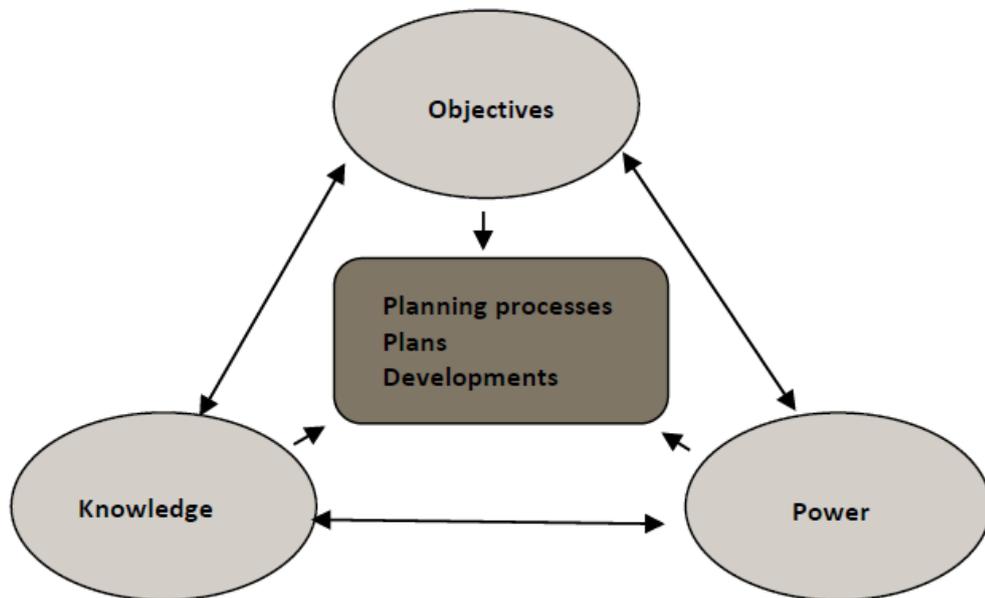


Figure 1: Objectives, knowledge and power of the actors in the planning processes reciprocally affect each other, the planning processes, the plans and developments (figure based on Tennøy, 2012a).

Shared *understandings and knowledge* concerning the issues at hand, and potential ways of achieving defined objectives, are other keywords when discussing coordination and steering land-use and transport developments in directions contributing to goal achievement (Bryson et al., 2015; Næss, Hansson, Richardson & Tennøy, 2013; Stead & Meijers, 2009; Tennøy, 2012a; Tennøy, Hansson, Lissandrello & Næss, 2016).

Knowledge *produced* in planning processes – analyses, recommendations and the plans themselves – is supposed to inform decision-making actors. Knowledge held, accepted and applied by actors in the process will influence the knowledge, recommendations and plans they produce (Tennøy et al., 2016). Since planning processes are normally inter-disciplinary, conflicts often occur over what knowledge and which understandings are to be understood as the more valid, relevant and ‘true’. The knowledge used will affect how objectives are prioritised, as this affects problem definitions and understandings of alternative ways of solving problems. It will also affect power distribution, since those holding what are understood as more relevant knowledge or methodologies may become more powerful.

Distribution and exertion of *power* will obviously affect whether regional authorities are able to coordinate and steer land-use and transport planning, and also the plans and developments that are outcomes of the processes (Flyvbjerg, 1998; Hull, 2005, 2008; Stead & Meijers, 2009; Tennøy, 2012a, 2012b). Lukes’s (2005) three dimensions of power are relevant when analysing planning processes. He orders power as: Direct power, exercised to win in open conflicts; agenda-setting power, exercised to affect which issues are given prominence; and structural power, defining ‘the order of things’ and the actors’ roles in this order. Whether and how different actors exert the power they possess is another important factor (Flyvbjerg, 1998).

Power-distribution and exertion among involved actors affect which objectives are given prominence and what knowledge is used, since those most powerful have most influence on these issues.

2.3 Potential effects of stronger PBA tools and increased responsibility for roads

During our research, we investigated how changes in societal structure affected the way relevant actors acted and interplayed, and whether this strengthened the ability of regional authorities to coordinate and steer land-use and transport planning in directions contributing to stopping traffic growth. We focused on mechanisms through which increased responsibility for roads and new clauses (which make the PBA a stronger tool) might contribute to clarifying goal priorities and reducing goal conflicts as well as increasing and aligning knowledge and understanding and strengthening the power of counties to coordinate and steer.

Where goals are concerned, the revised PBA (Ministry of Local Government and Modernisation, 2008a) has stronger goal formulations and mechanisms for communicating governmental objectives and priorities than the previous PBA. The opening sentence states: *“The law should promote sustainable development for the benefit of the individual, society and future generations”* (PBA §1-1). Sustainable development was not mentioned in the previous law. The new law states that every four years the King (i.e. the Government) will document national expectations for regional and municipal planning, this to promote sustainable development (PBA §6-1). In 2014, after a long process, the national planning guidelines for coordinated housing, land-use and transport planning, dating back to 1993, were revised with minor changes (Ministry

of Local Government and Modernisation, 2014). The revised PBA introduced mandatory regional planning strategy processes, where every four years counties decide which plans need to be developed in the coming four years (PBA §7-1). These changes could clarify goal priorities at national level, increase the legitimacy of sustainability objectives, e.g. stopping traffic growth, and reduce goal conflicts. They could also lead to clarifications and priorities at the regional level, and thus strengthen their ability to coordinate and steer. With increased responsibilities for roads and transport budgets, counties were given leeway to set priorities between public transport service improvements, road safety, bicycle infrastructure and new roads. This could lead to changes in priority towards more traffic-reducing developments of transport systems.

The introduction of mandatory planning forums in the revised PBA could improve knowledge-sharing and development of common understandings. According to the new §5-3, regional authorities have to initiate and organize forums where intentions are to clarify and coordinate state, regional and municipal interests in regional and municipal plans. One could expect that transferring 80 per cent of national roads to the regional level would increase county expertise in road issues, and hence gather road and public transport competence at the regional level.

Changes directly affecting power include new responsibilities for roads and the introduction of the possibility to determine formally binding provisions in regional land-use plans (§8-5). The latter allows for binding municipalities with respect to selected, important land-use issues, and is understood to have the potential to become a powerful tool in steering land-use developments. The transfer of 80 per

cent of national roads to counties is a direct transfer of formal and financial power. It has the potential to contribute to the ability of counties to coordinate and steer transport sector developments to stop traffic growth if it is decided to exercise power to this end.

Our preliminary understanding is that stronger tools in the PBA and increased road responsibilities can contribute to clearer priorities, to more common understandings of problems and potential solutions, and to more power at the regional level. In turn, this will enable counties to manage conflicts and steer land-use and transport planning and developments in ways contributing to reduce traffic growth.

3. Research design, methodology and data

Our research was designed as case studies in 6 of the 19 Norwegian counties. We searched for counties with different experiences of stronger PBA tools and increased responsibilities for roads. We selected the two counties that at the time had introduced binding provisions in their regional land-use plans (Vestfold and Nordland), two counties that had made a special effort to coordinate land-use and transport planning but had not used binding provisions (Akershus and Sør-Trøndelag), and two counties that had issues with respect to coordinating land-use and transport planning (Hordaland and Buskerud). Hordaland county adopted binding provisions in its regional plan after we had selected the case counties.

Main data collecting methods were document studies and semi-structured in-depth interviews. In document studies, we concentrated on revisions of the PBA and on the reform involving transfer of responsibilities for roads to counties. We also read relevant recent planning and policy documents produced by the case counties. These

were mainly land-use plans, transport plans and planning strategies. In our reading, we focused on goal formulations and goal conflicts, whether land-use and different modes of transport were analysed in integrated or coordinated ways, how non-binding and binding (where relevant) provisions were formulated, and who had been involved in the planning processes.

To get an insight into processes related to land-use and transport planning, and how coordinated these processes were, we interviewed heads of the planning and the transport departments in each county, the planning coordinator, and in some cases other relevant actors (see appendix A for an overview of interviewees). Ideally, we would have interviewed more municipal and national actors. Within delimited frames, we decided to focus on regional actors. Interviews were conducted between March 2015 and September 2016. Seventeen interviews were conducted, some with two or three interviewees, each lasting for about two hours, and all but one face-to-face. As part of quality assessment, almost all interviewees controlled and corrected our minutes from the interviews. We focused on: (i) conflicts and conflict management in land-use and transport planning processes, (ii) how new responsibilities and PBA tools had been implemented, especially binding provisions, (iii) whether stronger PBA tools and increased responsibility for roads had affected objectives, knowledge and power in relevant planning processes, and (iv) coordination between land-use and transport planning (see appendix B for interview guide). We also participated in a conference organized by Nordland county and a seminar by Hordaland county concerning how their newly approved binding provisions could be implemented positively in municipalities.

In each case, we analysed data from the documents and interviews to develop context-related answers to our research question (operationalized in much the same way as the interview guide). There was a high degree of consistency between the documents and what the different interviewees said. If data were contradictory in any way, we checked with interviewees and documents for clarification. We also conducted cross-case analyses aimed at arriving at explanation-building generalization (Bergene, 2007). Here, we analysed similarities and differences between the experiences of the counties. We also analysed our data in a structure-agency perspective. We focused on how changes in the structure (changes in the PBA and road responsibilities) had affected the acting and interplay among the most relevant agencies (national, regional and municipal authorities), and how this had affected the ability of regional authorities to coordinate and steer in desired directions. In the text, we refer to case counties rather than to individual interviewees, since we mainly compare differences between cases.

Towards the end of the project, we presented preliminary findings, analyses and conclusions in an open seminar, and representatives from three case counties commented (all case counties were invited to the seminar). The discussions served as a quality assessment of our findings, and left room for deepening our understanding of findings and their implications.

4. Findings

4.1 Goal conflicts and how they are managed by regional authorities in planning processes

Our first research question concerned goal conflicts that negatively affect achievement of the zero-growth objective, and how regional authorities manage them in planning processes.

4.1.1 Prominent goals and goal conflicts

When listing main objectives in land-use and transport planning the answers were similar from county to county. Most interviewees mentioned stopping traffic growth or reducing traffic volumes, especially in urban areas. This was often concretised to sub-objectives like improving conditions for walking and cycling, improving public transport services, urban development in the form of densification and transformation rather than sprawl, and strengthening the competitiveness of city centres versus out-of-city shopping centres. Several interviewees referred to the zero-growth objective. Other objectives often mentioned were; making cities more attractive and liveable, land conservation (for agriculture, nature, outdoor recreation) and protection of cultural heritage (landscapes, buildings). The objectives were also stated in plans and policy documents (such as Akershus County & Oslo Municipality, 2015; Hordaland County, 2015; Trondheim Region, 2015). We can see an interesting tendency towards stronger goal-formulation in newer documents. For instance, the regional plan for sustainable land-use developed by Vestfold county (2013) states that one objective is an environmentally friendly, safe and efficient transport system. In their newly adopted planning strategy (2016), a County Council decision concerning zero-growth in traffic volumes on regional roads is referred to, and the regional plan states that the upcoming transport plan will suggest strategies towards achieving this objective.

Most interviewees focused on conflicts between overall objectives (which they felt responsible for achieving) and more local municipal objectives. A recurring conflict was municipal land-use plans, where municipalities with growth ambitions propose or allow plans for housing development, retail and industry – these in locations where they cause high demand for transport and car-traffic shares and often encroach on agricultural land. Developments like these usually affect roads and public transport investments and expenditure for counties, as for example when new housing projects are planned in areas that need to be facilitated with roads and public transport. Such plans are often initiated by landowners and/or developers, and municipalities want to allow the development. This is very much in line with what Antonson et al. (2016) found when investigating relations between regional and municipal planners in Sweden.

In some counties, the interviewees discussed goal conflicts between overall objectives, translated into concrete issues. This often concerned densification in and close to city centres, where the best agricultural land as well as cultural heritage landscapes, buildings and other artefacts were often found. Several interviewees mentioned goal conflicts around road investments (region enlargement, reduced travel resistance, traffic safety, but also increased traffic) and reduced traffic growth, and most mentioned goal conflicts between investments in roads versus financing public transport.

4.1.2 How regional authorities manage conflicts in regional plans

Counties are responsible for producing several different plans, with strategic land-use plans and plans for public transport and roads, the most relevant in our context.

Transport departments in counties are responsible for public transport and regional road plans and produce action plans annually in accordance with budgets approved by the County Council. These are often, but not always, anchored in more strategic plans. In all county cases, it is the public transport agencies that make proposals concerning public transport, while the National Public Roads Authorities (NPRA) write up proposals for investments, maintenance and operations related to the counties' roads. The proposals are normally based on steering signals from the County Council and the previous year's plans and budgets. The county administration may suggest changes before political cases are written up for approval by the County Council. Making these plans is understood to be more administrative than political.

Judging by interviews and documents, it seems that planning processes concerning public transport and roads take place in parallel, and do not involve much coordination, discussion, making priorities or settling disputes. Interviewees explained that public transport and roads were separate budget items, that budget shares were similar from one year to the next, and that there was never much to discuss. One interaction point was around infrastructure development. There were discussions and trade-offs around road budget processes with regard to the distribution of available budgets between road maintenance, traffic safety improvements, and the facilitation for modes of transport other than cars. Counties are vague when explaining the role of municipalities in transport plan processes. Municipalities obviously make demands for the improvement of roads and public transport services. On the basis of our interviews were unable to figure out how priorities were decided between projects in different municipalities. One county, Sør-

Trøndelag, met with relevant municipalities to decide which main roads should be upgraded to better serve aquaculture businesses. They decided on a 'salmon-route', and made clear that municipalities were expected to locate new aquaculture developments accordingly (Sør-Trøndelag County, 2016).

These findings indicate that there is not much process or coordination across levels or sectors in counties' transport planning processes. However, this may change. Several counties are making or planning to make more comprehensive regional transport plans where different modes of transport are seen in relation to one another. This is supposed to allow for analysing and discussing how funding should be used to achieve defined objectives. The comprehensive plans we have seen so far, however, are more like plans for roads, bicycles and public transport all in the same document rather than integrated transport plans (Hordaland County, 2012; Nordland County, 2012). Interviewees in Vestfold county explained that they had taken responsibility for the previous transport plan process for the first time. They invited municipalities to participate, together with other relevant actors, and found that this was a good, political process. Vestfold recently decided to make a regional, comprehensive transport plan (Vestfold County, 2016), while other counties aim to proceed with similar processes.

Counties aim to involve municipalities and other agencies in producing regional land-use plans, as well as sub-plans for retail development, and processes for deciding formally binding planning provisions in regional plans. These processes vary in scope. In some cases, there is year-long, intensive, collaboration with several seminars and hearings on strategies, preliminary drafts and concrete solutions (for

instance, Vestfold). In others, the county administration draws up a draft which is sent to municipalities and others for comment and input (for instance, Sør-Trøndelag). The county interviewees report varying degrees of conflict in these processes. Also, the three counties that had included binding provisions (Hordaland County Council, 2014; Nordland County Council, 2013; Vestfold County Council, 2009) reported varying degrees of participation from municipalities. Different issues were discussed, and different conflicts arose. In one case, this was mainly about which centres should be included as areas where shopping centre developments were allowed (Nordland). In the other two cases it was also about the strategies that should be followed in centre and retail developments, how restrictive the provisions should be, and how they should be written up (Vestfold and Hordaland).

Counties have good and established routines for cooperation between land-use and transport departments on a case-by-case basis. Typically, they consult each other when a plan or project may affect the other's issues. Some also routinely send plans to the other department for comment, or have checklists that determine whether other departments should be consulted. Employees in different departments work closely, and discuss each other's issues with ease. Some interviewees said that there had been more cooperation between the sectors 'lately'. Several interviewees, from both sides, also saw a demand for more cooperation on the more strategic planning and policy levels. Politicians in some counties have asked in particular for more coordination and cooperation, and some have decided through their regional planning strategy discussions that they need to develop coordinated land-use and transport plans. We will return to this point later in the article.

4.1.3 How regional authorities manage conflicts in municipal land-use planning

In processes and conflicts with municipalities around their land-use plans, interviewees in the counties explain that dialogue and communication are their main tools. They refer to regional plans, governmental planning guidelines or other national documents, or to planning knowledge when explaining why suggested plans or projects are not in accordance with overall objectives and strategies. All counties have arenas for knowledge transfer and knowledge-sharing (regional planning forums and planning seminars) which they see as indispensable in their communication with and guidance for municipalities. Most have planning coordinators or dedicated planners guiding and serving specific municipalities.

Municipalities may decide to ignore guidance and advice given by the county administration. In such situations municipalities can lobby county politicians to make decisions that keep county authorities from intervening through writing negative responses in public hearings, or making formal objections. Again - we will return to this. County authorities respond to this mainly using two strategies: (1) Explaining to county politicians why the municipal plan or project conflicts with overall objectives and strategies, or (2) cooperating with other agencies having the right to object formally. Several county interviewees are frustrated that politicians do not understand when they say 'yes' to something, for instance expanding out-of-city shopping centres, that tacitly they are saying 'no' to something else, in this case to strengthening the main city centre.

A point that came up in almost all interviews was the practice of formal objections (PBA §5-4), which is understood as a strong intervention and the most important sanction tool a county has. If a county or another authority formally objects to a plan, the Ministry of Local Government and Modernisation decides whether it can be approved. Currently (with the right-wing government), there is a strong focus on reducing the use of formal objections, since local self-governance is given high priority and since there is a strong focus on time-efficient planning processes. There has been a distinct change, where most Ministry decisions with respect to formal objections are declared in favour of the municipalities (Strand & Næss, 2016). These are political decisions, strongly coloured by whichever party is in government. This means, as interviewees in all counties explain, that they have lost their most powerful tool for steering in situations where they disagree with the municipalities. Previously, municipalities were to some extent disciplined simply in knowing that the county could make formal objections with which the Ministry would often agree. At present, counties, municipalities, landowners and developers know very well that this is often not the case. County authority abilities to steer and coordinate land-use and transport system developments are reduced. All actors do try to avoid formal objections in any case, since it delays planning and approval of plans.

Counties struggle with their role in processes and conflicts with municipalities.

Almost all interviewees said during the interviews that they cannot be an ‘over-municipality’ (*overkommune* in Norwegian). This relates to the strong understanding in Norway that responsibilities and powers deciding land-use development are placed at municipal level. This is also clearly defined in the PBA. At the same time, counties are responsible for making regional land-use plans, which guide land-use

developments in the municipalities, especially with respect to issues that have significant effects beyond municipal borders. Counties are also responsible for guiding municipalities in their land-use planning, and for safeguarding national and regional issues. They are further responsible for road infrastructure and public transport which is affected by the municipalities' land-use development. The counties' role is challenging in that they struggle to find a balance when it comes to how much and how strong they influence and steer land-use developments in the municipalities.

4.2 Effects of stronger tools and new responsibilities

In answering our second research question, we investigated whether new tools in the PBA and increased road responsibilities have affected objectives, knowledge and power in planning processes. Had this enabled the counties to steer land-use and transport planning in directions contributing to plans with higher goal achievement potential? And, if not, why not?

4.2.1 Objectives

None of the interviewees found that including sustainable development in the PBA purpose clause had any effect. This was already well anchored in regional and municipal plans, with the changes in goal formulation understood more as an adjustment to practice. Most agreed that National expectations were what most counties and municipalities had known and been saying for years. A few interviewees explained that they sometimes referred to the document in discussions with municipalities. Others found it better not to highlight requirements and directives from national levels, since they did not go well with the local level and county

politicians who do not appreciate too much interference from national authorities.

The interviewees found that the revised National planning guidelines in all practical aspects were similar to the previous ones. If anything, they were weaker.

Furthermore, several interviewees said that there was not much help in the National guidelines when the Ministry turned down most formal objections made, with reference to the same guidelines.

Counties had different experiences with the introduction of mandatory regional planning strategies. In one county (Nordland) there were no significant effects. In others, by involving municipalities and other relevant agencies, there was greater political interest and more focus on following up on plans given priority, and more legitimacy for doing so. In at least two counties (Sør-Trøndelag and Vestfold) this resulted in requests for more comprehensive plans.

With increased transport budgets due to the transfer of national roads, counties were given more room to prioritise between, for instance, improving public transport, investing in cycling infrastructure and facilitating road traffic. Interviewees reported increased political interest in transport issues, and an increased focus on public transport in road projects, but we found no clear indications of actual changes in priorities between modes of transport. This is in accordance with Krogstad and Leiren (*in review*), who found that politicians wanted to invest in both public transport and roads, that transport budgets overall have increased, and that there have been no significant shifts in the budget shares for public transport and roads. Counties explained that they needed to use much of the funding for catching up on a 'maintenance lag'. This reduced their opportunities for prioritizing other modes than

the private car. In any case, in interviews there were frequent references to the ‘zero-growth objective’. The interviewees did not see this as directly related to changes in the PBA or in road responsibilities. They referred instead to the Governmental Climate Agreement (Ministry of Local Government and Modernisation, 2012), the National Transport Plan (Ministry of Transport and Communications, 2013) and sometimes to National Expectations (Ministry of Local Government and Modernisation, 2011, 2015), which all stated similar objectives.

4.2.2 Knowledge

The county interviewees did not think that they had changed the ways they guided municipalities, or how they work with knowledge transfer and knowledge building. All agreed that mandatory regional planning forums, introduced in the 2008 revision of the PBA, are useful and important. They facilitate cooperation and knowledge transfer, and increase efficiency. The interviewees did not see this as something new, however; it had been practised for years. It could be that this change in the PBA was merely an institutionalization of existing practice in some or all counties. We did most of our interviews almost seven years after the revision of the PBA, which means that county interviewees, too, may not relate this to changes in the law, even if in reality this was the case.

The transfer of road responsibilities from national to regional level seems not to have had any direct and significant effect on counties’ expertise on these issues. Since 1963, there has been a common administration of national and regional public roads in Norway, the NPRA, which holds most of the expertise concerning road planning, construction, maintenance, traffic safety, etc. Shifting responsibilities for roads did

not bring about county administrations building in-house knowledge on this issue. Instead, the counties order services from the NPRA through contracts, and the professional expertise is still located in the NPRA (see also Krogstad and Leiren, *in review*).

Interviewees stated that planners and other professionals in municipalities, in the NPRA and in the other agencies they work with, are knowledgeable. Several discussed cultural differences, but the main understanding was that others ‘are good at what they are doing’. Interestingly, a stronger focus on stopping traffic growth and GHG emissions had revealed that the knowledge base concerning how land-use and transport developments contribute, has shortcomings. This concerns, for instance, concrete effects of nodal point densification, road capacity expansion, bicycle infrastructure, and public transport service improvements in various contexts, such as larger and smaller cities. In parallel, there was an understanding that ‘all professionals know this’. Several interviewees, from the land-use side as well as the transport side, pointed out that they felt an increasing need for a common knowledge base, and to see things in a ‘broader perspective’.

4.2.3 Power

Three case counties (Vestfold, Nordland and Hordaland) had made binding provisions in the regional plan, which we assumed would strengthen their direct power to steer land-use developments. These provisions define centre structure and location of retail developments. The intention is to steer new retail developments into city centres and other selected areas in order to strengthen city centres and reduce shopping-related traffic. The interviewees found it easy to explain why the

provisions concerned these issues. For years, national regulations have required counties to define a hierarchy of centres in each municipality (Ministry of Local Government and Modernisation, 2008b). Regional retail development plans need the approval of the County governor's office. By defining binding provisions in their regional plans, counties (in cooperation with municipalities) define provisions adjusted to their context, and shift the power to approve centre structure from the County governor (national level) to the County Council (regional level). These were the main arguments for introducing binding provisions for retail developments in Nordland and Hordaland. In Nordland, some municipalities hoped this would contribute to looser steering of retail developments, which the county interviewee denied had happened. In Hordaland, the county first suggested 'stronger' provisions than those adopted, but had to reduce its ambitions to satisfy the municipalities. In Vestfold, the introduction of binding provisions was a response to a call from municipalities for clarification, predictability and justice. When asked if the introduction of binding provisions had had an effect on plans and developments, Hordaland had not had enough experience with them and could not tell, while Nordland had not seen any significant changes. Vestfold, which had most experience, found that the plan and the binding provisions had worked well and improved their steering of retail developments. It had also contributed to fewer conflicts with municipalities and in general more satisfied municipalities, as long as the Government supported the counties in cases where they made formal objections. In the current situation, where, to a higher degree, the Government gives way to municipalities pursuant in such cases, 'the battle is on again', and the positive effects are significantly reduced.

We also asked these counties why they had not introduced binding provisions into regional plans for the location of new housing projects for instance, which many reported often caused conflicts. The counties found this to be far-fetched, with reference to the ‘over-municipality’ issue. Their understanding was that municipalities would not accept binding provisions for housing developments; this would be too strong an intervention. The idea ‘would be dead from the start’, as one planning director put it.

Counties that had not included binding provisions in their regional plans (Akershus, Sør-Trøndelag and Buskerud) explained this along the same lines. It is too strong an intervention in what is understood to be the responsibilities of municipalities, and the municipalities (and in many cases the county politicians) would not accept it. The binding provisions therefore seem to have strengthened the direct power of the counties to steer land-use developments to a lesser degree than intended or expected; this is because the counties do not feel they have the legitimacy to use this instrument in ways that matter.

Interviewees confirmed that the changes in road responsibilities have increased the power of counties within the transport sector, not least through politicians exerting power by involving themselves in transport debates much more than previously.

County politicians now order services from the NPRA (via the county administration, and through contracts paid from their own budgets) rather than going through the national government (see also Krogstad and Leiren, *in review*).

County politicians feel more strongly attached to the issue and there is more local involvement, especially in relation to large infrastructure projects. Some counties had

moved the administrative leadership of transport plan processes from NPRA to the counties. In all counties, the NPRA still makes planning proposals for actions and funding, and still holds strong agenda-setting powers in these issues.

It seems that the most significant change is in how counties now exercise their agenda-setting power to determining order of precedence, and to coordinate and steer. Five counties (all but Nordland) have made, are in the process of making, or intend to make - regional overall land-use and transport plans, and all but one (Vestfold) are (or will become) first-generation plans. These initiatives come from various political levels. The motivation varies to some extent, but is mainly around the steering of land-use and transport developments more efficiently in desired directions, and arriving at plans contributing to clarification, predictability and justice. The county interviewees highlight the importance of good process, with participation from the municipalities and a broad spectrum of relevant actors if the resulting plans are to become good steering instruments. One aim is for the involved parties to feel ownership, and to see these as common plans rather than as the counties' plans. The processes are understood as arenas for dialogue, knowledge-sharing, trust-building, mutual understanding, anchoring and commitment. The aims are to arrive at priority objectives, common understandings and agreements on main strategies and policies. This would give the counties more legitimacy (not least in their own understanding) to promote priority objectives, and to arrest initiatives that are not in accordance with the commonly agreed plan. By initiating these plans, the counties have taken a position where they can define the agenda and lead the processes. Vestfold county had experiences with using their regional land-use plan, developed in close dialogue with municipalities and others, as a steering tool, and found it very useful. So far, the

understanding is that consensus is required, which often leads to weaker plans than the counties find necessary in achieving priority objectives.

5. Discussions

5.1 Changes in structural conditions had only weak effects

Our investigation of practices in six Norwegian counties revealed that stronger PBA tools and increased responsibility for roads did not contribute much to clarifying or changing *goal* priorities, but interviewees reported that clear signals from national governments had moved the zero-growth objective higher up the agenda. The interviewees saw little or no effects from the investigated changes on *knowledge* or expertise in the counties, the municipalities or other agencies, or on knowledge-sharing and shared understandings. However, they did report increasing demand for a shared knowledge base, and for more concrete and empirically documented knowledge concerning effects of land-use and transport developments on traffic volumes. We saw this as a response to priority being given to the zero-growth objective. Stronger PBA tools and increased responsibilities for roads had not strengthened the counties' direct *power* to steer land-use development, but the interviewees saw that the new road responsibilities had caused county politicians to exert their increased structural power through involvement in transport infrastructure issues. We also saw that the counties now exerted their agenda-setting power more than before, through initiating and leading regional coordinated land-use and transport plans, and more comprehensive transport plans.

We found few indications that this affected how counties managed conflicts, or that they coordinated and steered land-use and transport planning in directions

contributing to stopping traffic growth any more than before. Increased road responsibilities and budgets did allow for more coordinated planning for different modes of transport, and for prioritizing other modes than the private car, but this has not happened. Likewise, collecting more policy instruments in the counties, combined with stronger PBA tools and increased transport budgets, allowed coordination of land-use and transport developments across sectors and levels. We found few indications that counties have become more successful in terms of coordination. The counties also agreed that their first and second generation coordinated land-use and transport plans do not steer land-use and transport developments in significantly different directions than would have happened without these plans.

We conclude that stronger PBA tools and increased responsibilities for roads only to a limited degree have contributed to goal clarification and prioritisation, increased knowledge and common understandings, or more power to the counties. Following on from this, the structural changes we investigated have had only weak effects on the ability of counties to manage conflicts, and to coordinate and steer land-use and transport planning in directions contributing to stopping traffic growth.

5.2 Structure vs. agency

We understood the introduction of stronger PBA tools and increased road responsibilities for the counties as changes in the societal structure that organise responsibilities and powers in land-use and transport planning (Bhaskar, 1993). Our initial understanding was that these structural changes would affect the actions and interplay among key agencies (relevant national, regional and municipal authorities) in

ways that would strengthen the ability of regional authorities to coordinate and steer planning and development in desired directions. As discussed, we found that this has happened only to a limited degree.

As expressed by most county interviewees, one explanation is that the current right-wing government acts differently as regards formal objections compared to the previous social-left government (as discussed in section 4.1.3). There has been a distinct change, where most Ministry decisions concerning formal objections now favour the municipality (Strand & Næss, 2016). This means that counties have lost their most powerful tool for steering in situations where they disagree with municipalities. Governmental decisions concerning formal objections are the arena in land-use planning where national and municipal levels meet directly. Here, the current government chooses to reduce the direct power of the regional authorities, and instead empowers the municipal authorities. This greatly affects the interplay between regional and municipal authorities, as the county interviewees have explained (see section 4.1.3). To a lesser degree, developers and municipalities see advantages in aligning their plans with regional plans or following guidance from regional authorities. They propose land-use plans that are not in accordance with national and regional objectives, such as the zero-growth objective, since they expect to win in conflicts with regional authorities. No longer can municipal planners stymie growth-ambitious local politicians with reference to formal objections. Regional authorities (and other agencies with the right to make formal objections) avoid making formal objections, as they expect to be overruled. The national planning

guidelines have therefore lost much of their effects, since actors expect that formal objections with reference to the guidelines will be overruled.

This practice also affects the *legitimacy* of the regional authorities to coordinate and steer land-use and transport planning and development. As described in section 4.1.3, counties struggle to find their role in land-use planning. When the current government overrules regional authorities in conflicts with municipalities (as discussed), they also reduce their legitimacy. This explains why counties hesitate to use the potentially powerful ‘binding provisions in regional plans’ tool, or why they would not even consider using it in difficult issues, such as the location of new housing developments. Likewise, it explains why counties feel there needs to be consensus on all issues included in regional plans, which results in plans contributing less to stopping traffic growth than they potentially could do. It may also explain why county interviewees, in concert, state that tools are not the problem, but rather political will and leadership, especially at national level.

5.3 And yet, something is changing ...

And yet, something *is* changing that *does* strengthen the ability of counties to coordinate and steer land-use and transport system development. It seems that this has to do with an interaction between societal goal priorities, clearer understandings of the need for professional knowledge, and counties responding by exercising their agenda-setting power more strongly (as discussed in section 4.2.3).

Two objectives in particular seem to have moved to the top of the agenda – more attractive and liveable cities and the zero-growth objective. Similar, but weaker objectives have been stated in plans at all levels for years, but without being taken too seriously. These days, it seems they are understood as real objectives that are supposed to have been achieved. This has made knowledge concerning the effects of land-use and transport systems development on travel behaviour and traffic volumes more important and valid. Counties have utilized this opportunity to communicate relevant knowledge to municipalities and agencies, who are now more open to receiving it. An increased focus on the zero-growth objective has brought about an understanding of need for regional steering and coordination, which has strengthened the legitimacy of counties to exercise power.

We have also seen counties exercising their agenda-setting power more than before, through regional planning strategy processes, and not least by initiating regional coordinated land-use and transport planning processes (as discussed in section 4.2.3). In this way, they define an overarching framework for integration of sectoral policies, which gives room for communication between sectors and levels and development of common planning concepts, understandings and goals, as Stead and Meijers (2009) called for. In this framework – in this arena – the counties are natural leaders, since they are responsible for making the regional land-use and transport plans, for overall land-use planning, and for developing public transport and roads. From this position, they promote priority objectives, transfer relevant knowledge, develop overall strategies, and gain legitimacy to steer and coordinate land-use and transport development. So far, they have not really challenged the municipalities, or the NPRA, or other strong agencies. Rather, they have been seeking consensus, and have acted

as coordinators instead of leaders. Still, there is a significant shift in attitude and understanding of roles and responsibilities.

6. Concluding remarks

Steering land-use and transport planning in directions contributing to more sustainable mobility patterns has been difficult in many cities and countries. This has partly been explained by the multi-level and cross-sectoral nature of the issue, combined with embedded goal conflicts and the lack of an institution with the power to coordinate and steer towards defined objectives. One might assume that structural conditions that have changed in ways that empower an institution could improve goal-achievement. Changes in structural conditions were seen in 2008, when the Norwegian government equipped regional authorities with stronger tools (paragraphs elucidating the roles) for steering, through the revision of the PBA, and again in 2010, when more power was given to the transport sector with the transfer of 80 percent of national roads to the regional level. We decided to investigate whether this affected the ability of regional authorities to coordinate and steer land-use and transport planning in directions facilitating more sustainable mobility patterns.

We took the position that societal structures and agencies are separate entities that interact, implying that changes in societal structures would bring about changes in how agencies act, which could produce different outputs. However, we found only minor effects of structural changes on the ability of regional authorities to manage conflicts, and to coordinate and steer land-use and transport planning in directions facilitating more sustainable mobility patterns. The main explanation is that the

current national government overrules regional authorities in conflicts with municipalities in ways that reduce the direct power, as well as the legitimacy, of regional authorities to use available tools. *One lesson learnt* is that changing structural conditions does not, in and of itself, ensure improvement. The agencies involved need to support the intended changes, in our case by acting in ways that give regional authorities the power and legitimacy to use available tools to coordinate and steer towards goal achievement.

In studying the interplay between agencies more closely, we defined a theoretical framework consisting of mechanisms related to objectives, knowledge and power of the agencies involved. This allowed nuanced empirical analysis of the fine-grained inter-agency dynamics, and how this affects the outcomes of multi-level and cross-sectoral planning processes. The findings demonstrated that regional authorities can find ways of exerting power to coordinate and steer. As new objectives moved up the agenda, knowledge held by regional authorities became more relevant and provided a legitimate reason for them to take a lead; they responded by initiating processes for regional land-use and transport plans. In this they were natural leaders and had the legitimacy to exercise their agenda-setting power and to take a lead. *A second lesson learnt* is therefore that agencies might find new ways of exerting power to coordinate and steer, and that changes in objectives, knowledge or power could promote legitimacy to lead. Our initial understanding – that objectives, knowledge and power are reciprocally interrelated and affect planning processes and resulting plans – is hence supported by the findings.

A key-word in these discussions is *legitimacy*. We have seen that regional authorities have the tools to coordinate and steer, but are not given the legitimacy and hence the power to use them. We have also seen that regional authorities find ways to define processes where they have legitimacy to take a lead. *A third lesson learnt* could be that the rules are not the game, and the ways actors act can change how the game is played without the formal rules being changed.

These findings may not be surprising, but we believe our analysis will provide new insights with respect to how the interplay between actors involved in overall land-use and transport planning acts out. By defining regional authorities as our focal points, and analysing the interplay between national, regional and municipal level agencies from this perspective, we took a position rarely seen in previous studies. This has contributed some novel insights concerning, among other aspects, how regional authorities struggle to find, or take on, a role that allows them to coordinate and steer. It also touches upon the intangible issue of legitimacy – how it could be achieved, how it could be lost, and how it affects and is affected by the ways agencies act and interact. By studying the interactions between agencies involved in multi-level land-use and transport planning in more depth than seen in previous studies, we believe that our study has contributed a richer and more nuanced analysis that may enrich theoretical understandings of the challenges involved. Focusing on mechanisms related to objectives, knowledge and power, and their mutual interaction, has allowed for sharper analysis of the elements that affect and shape power and the legitimacy to coordinate and steer. This concerns, for instance, the influence of goal-setting, and how exertion of different kinds of power affect the

game. In future research, we will dwell more on the legitimacy aspect, which we believe has more to offer and can contribute to valuable insights.

The primacy of challenges related to steering land-use and transport developments towards sustainable mobility patterns is not exclusive to Norway. The same can be said of the complexities related to coordination and steering across levels, sectors and geographies. We therefore believe our empirical analysis of the fine-grained dynamics between actors involved in cross-sectoral and multi-level planning processes is relevant for other complex issues, and across international contexts. The new insights presented here could assist the ongoing discussions in many countries on how land-use and transport planning can be organized to facilitate more sustainable mobility patterns.

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References

- Aall, C. (2012). The early experiences of local climate change adaption in Norwegian compared with that of local environmental policy. Local Agenda 21 and local climate change mitigation. *Local Environment*, 17(6-7), 579-595.
- Akershus County & Oslo Municipality (2015). *Regional plan for areal og transport i Oslo og Akershus* [Regional plan for land use and transport in Oslo and Akershus]. Retrieved from <http://www.akershus.no>
- Antonson, H., Isaksson, K., Storbjörk, S., & Hjerpe, H. (2016). Negotiating climate change responses: Regional and local perspectives on transport and coastal zone planning in South Sweden. *Land Use Policy*, 52 (March 2016), 297-305.
- Baldersheim, H., Sandberg, S., Ståhlberg, K. & Øgård, M. (2001). *Norden i regionernas Europa* [Nordic countries in a Europe of regions]. København: Nordisk Ministerråd.
- Banister, D. (2008). The sustainable mobility paradigm. *Transport Policy*, 15(2), 73-80.
- Bergene, A. C. (2007). Towards a Critical Realist Comparative Methodology. Context-sensitive Theoretical Comparison. *Journal of Critical Realism*, 6(1), 5-27.
- Bhaskar, R. (1993). *Dialectic: The Pulse of Freedom*. London: Verso.
- Bryson, J. M., Crosby, B. C. & Stone, M. M. (2015). Designing and Implementing Cross-Sector Collaborations: Needed and Challenging. *Public Administration Review*, 75(5), 647-663.
- Danermark, B., Ekström, M., Jakobsen, L., & Karlsson, J.C. (1997). *Explaining Society. Critical realism in the social sciences*. London, UK: Routledge.
- European Environment Agency (2016). *EEA signals 2016: Towards clean and smart mobility. Transport and environment in Europe*. Copenhagen: EEA.
- Flyvbjerg, B. (1998). *Rationality and power. Democracy in Practice*. Chicago, IL: The University of Chicago Press.
- Forester, J. (1989). *Planning in the Face of Power*. Berkley, CA: University of California Press.
- Hanssen, G. S., Mydske, P. K., & Dahle, E. (2013). Multi-level coordination of climate change adaption: by national steering or by regional network governance? *Local Environment*, 18(8), 869-887.
- Higdem, U., & Hanssen, G.S. (2014). Handling the Two Conflicting Discourses of Partnerships and Participation in Regional Planning. *European Planning Studies*, 22(7), 1444-1461.
- Hordaland county (2012). *Regional transportplan. Hordaland 2013–2024* [Regional transport plan for Hordaland 2013-2024]. Retrieved from <https://www.hordaland.no>
- Hordaland county (2015). *Regional areal- og transportplan for Bergensområdet. Høyringsforslag* [Regional land use and transport plan for the Bergen area. Draft proposal]. June 2015. Retrieved from <https://www.hordaland.no>

- Hordaland County Council (2014). *Regional plan for kjøpesenter, Hordaland* [Regional plan for shopping centres, Hordaland]. FOR-2014-12-10-1954. Retrieved from <https://lovdata.no>
- Hrelja, R., Monios, J., Rye, T., Isakson, K., & Scholten, C. (2017). The interplay of formal and informal institutions between local and regional authorities when creating well-functioning public transport systems. *International Journal of Sustainable Transportation*, 11(8), 611-622.
- Hrelja, R. (2015). Integrating transport and land use planning? How steering cultures in local authorities affect implementation of integrated public transport and land use planning. *Transportation Research Part A*, 74(April 2015), 1-13.
- Hull, A. (2005). Integrated transport planning in the UK: From concept to reality. *Journal of Transport Geography*, 13(4), 318-328.
- Hull, A. (2008). Policy integration: What will it take to achieve more sustainable transport solutions in cities? *Transport Policy*, 15(2), 94-103.
- Hurlimann, A. C., & March, A. P. (2012). The role of spatial planning in adapting to climate change. *Wiley Interdisciplinary Review*, 3(4), 477-488.
- Krogstad, J. R., & Leiren, M. D. (in review). Coordination of regional transport policies: Insights from a Norwegian decentralisation reform.
- Lukes, S. (2005). *Power. A Radical View*. Second edition. Hampshire, UK: Palgrave Macmillan.
- Ministry of Local Government and Modernisation (2008a). *Lov om planlegging og byggesaksbehandling (plan- og bygningsloven)* [Law on planning and building regulations (Planning and Building Act)]. LOV-2008-06-27-71. Retrieved from <https://lovdata.no>
- Ministry of Local Government and Modernisation (2008b). *Rikspolitisk bestemmelse for kjøpesentre* [Governmental provisions for shopping centres]. FOR-2008-06-27-742. Retrieved from <https://lovdata.no>
- Ministry of Local Government and Modernisation (2011). *Nasjonale forventninger til regional og kommunal planlegging* [National expectations to regional and municipal planning]. Decision made by Royal decree, June 24th, 2011. Retrieved from <https://www.regjeringen.no>
- Ministry of Local Government and Modernisation (2012). *Meld. St. 21 (2011–2012) Norsk klimapolitikk* [White Paper 21 (2011-2012) Norwegian Climate Politics]. Retrieved from <https://www.regjeringen.no>
- Ministry of Local Government and Modernisation (2014). *Statlige planretningslinjer for samordnet bolig-, areal- og transportplanlegging* [National planning guidelines for housing-, land use-, and transport planning]. Retrieved from <https://www.regjeringen.no>
- Ministry of Local Government and Modernisation (2015). *Nasjonale forventninger til regional og kommunal planlegging* [National expectations to regional and municipal planning]. Decision made by Royal decree, June 12th, 2015. Retrieved from <https://www.regjeringen.no>

- Ministry of Local Government and Modernisation (2016). *Meld. St. 22 (2015–2016) Nye folkevalgte regioner – rolle, struktur og oppgaver* [White Paper No. 22 (2015-2016) New democratically elected regions - role, structure and tasks]. Retrieved from <https://www.regjeringen.no>
- Ministry of Municipal and Regional Affairs (2007). *St.meld. nr. 12 (2006-2007) Regionale fortrinn – regional framtid* [White Paper no 12 (2006-2007) Regional advantages – regional future]. Retrieved from <https://www.regjeringen.no>
- Ministry of Transport and Communications (2013). *Meld. St. 26 (2012–2013) Nasjonal transportplan 2014–2023* [White Paper 26 (2012-2013) National Transport Plan 2014-2023]. Retrieved from <https://www.regjeringen.no>
- Ministry of Transport and Communications (2017). *Meld. St. 33 (2016–2017) Nasjonal transportplan 2018–2029* [White Paper 33 (2016-2017) National Transport Plan 2018-2029]. Retrieved from <https://www.regjeringen.no>
- Mydske, P. K. (Ed.) (2006). *Skandinaviske regioner – plass for politikk?* [Scandinavian regions - room for politics?]. Bergen, NO: Fagbokforlaget.
- Nordland county (2012). *Transportplan Nordland 2013 - 2024* [Transport plan Nordland 2013-2024]. Retrieved from <https://www.nfk.no>
- Nordland County Council (2013). *Regional planbestemmelse om kjøpesentre, Nordland* [Regional planning provisions on shopping centres, Nordland]. FOR-2013-02-25-299. Retrieved from <https://lovdata.no>
- Normann, R., & Isaksen, A. (2009) *Klynge-governance: Perspektiver på styrt utvikling av regionale næringsklynger* [Cluster governance: Perspectives on steered development of regional commercial clusters]. Kristiansand, NO: Agderforskning AS.
- Norwegian Environment Agency (2015). *Miljøstatus – Miljøinformasjon fra offentlige myndigheter* [Status of the Environment - Environmental information from public authorities] Retrieved from <http://www.miljostatus.no>
- Næss, L. O., Bang, G., Eriksen, S., & Vevatne, J. (2005). Institutional adaption to climate change. Flood responses at the municipal level in Norway. *Global Environmental Change*, 15(2), 125-138.
- Næss, P., Hansson, L., Richardson, T., & Tennøy, A. (2013). Knowledge-based land use and transport planning? Consistency and gap between ‘state-of-the-art’ knowledge and knowledge claims in planning documents in three Scandinavian city regions. *Planning Theory & Practice*, 14(4), 470-491.
- Offerdahl, A. (2005). Iverksettingsteori – resultatene blir sjelden som planlagt, og det kan være en fordel? [Implementation theory - the results are rarely as planned, and it may be an advantage?] In Baldersheim, H. and Rose, L.E. (eds.). *Det kommunale laboratorium. Teoretiske perspektiver på lokal politikk og organisering* [The municipal laboratory. Theoretical perspectives on local politics and organization] (pp. 219-238). Second edition. Oslo, NO: Fagbokforlaget.
- Owens, S., & Cowell, R. (2002). *Land and Limits. Interpreting sustainability in the planning process*. London, UK: Routledge Taylor & Francis Group.

- Schön, D. (1983). *The Reflective Practitioner*. New York, NY: Basic Books.
- Selstad, T., & Onsager, K. (2004). *Regioner i utakt* [Regions out of sync]. Trondheim, NO: Tapir akademiske forlag.
- Stead, D., & Meijers, E. (2009). Spatial Planning and Policy Integration: Concepts, Facilitators and Inhibitors. *Planning Theory & Practice*, 10(3), 317-332.
- Strand, A., & Næss, P. (2016). Local self-determination, process-focus and subordination of environmental concerns. *Journal of Environmental Policy & Planning*, 19(2), 156-167.
- Sør-Trøndelag County (2016). *Veistrategi 2016-2030* [Road Strategy 2016-2030]. Retrieved from <https://www.stfk.no>
- Tennøy, A. (2012a). *How and why planners make plans which, if implemented, cause growth in traffic volumes. Explanations related to the expert knowledge, the planners and the plan-making processes* (Doctoral dissertation). PhD thesis 2012:01. Norwegian University of Life Sciences, Ås, NO.
- Tennøy, A. (2012b). Areal- og transportplanlegging - institusjonelle og organisatoriske betingelser for samordning og måloppnåelse [Land use and transport planning – institutional and organisational conditions for integration and goal achievement]. *Kart og Plan* 4, 258-268.
- Tennøy, A., Hansson, L., Lissandrello, E., & Næss, P. (2016). How planners' use and non-use of expert knowledge affect the goal achievement potential of plans: Experiences from strategic land-use and transport planning processes in three Scandinavian cities. *Progress in Planning*, 109(October 2016), 1-32.
- Trondheim Region (2015). *IKAP-2. Mål, strategier og retningslinjer for arealutvikling i Trondheimsregionen* [Inter-Municipal Land Use Plan-2. Objectives, strategies and guidelines for area development in the Trondheim region]. Retrieved from <https://trondheimsregionen.no>
- UN Habitat (2013). *Planning and design for sustainable urban mobility. Global report on human settlements 2013*. New York, NY: Routledge.
- Vestfold county (2013). *Regional plan for bærekraftig arealpolitikk (RPBA) - Et attraktivt & bærekraftig Vestfold. Mål, strategier, retningslinjer og effektmål*. [Regional plan for sustainable land use policy – An attractive and sustainable Vestfold. Objectives, strategies, guidelines and indicators]. Retrieved from <https://www.vfk.no>
- Vestfold county (2016). *Regional planstrategi for Vestfold for perioden 2016 - 2020*. [Regional planning strategy for Vestfold in the period 2016 – 2020].
- Vestfold County Council (2009). *Forskrift om plan for sentrumsutvikling, Vestfold* [Regulations on urban development plans, Vestfold]. FOR-2009-10-20-1911. Retrieved from <https://lovdata.no>