



Metagoverning through intermediaries: the role of the Norwegian “Klimasats” Fund in translating national climate goals to local implementation

Fay M. Farstad, Anders Tønnesen, Ingrid Christensen, Bård Sødal Grasbekk & Kristiane Brudevoll

To cite this article: Fay M. Farstad, Anders Tønnesen, Ingrid Christensen, Bård Sødal Grasbekk & Kristiane Brudevoll (2022): Metagoverning through intermediaries: the role of the Norwegian “Klimasats” Fund in translating national climate goals to local implementation, Policy Studies, DOI: [10.1080/01442872.2022.2142205](https://doi.org/10.1080/01442872.2022.2142205)

To link to this article: <https://doi.org/10.1080/01442872.2022.2142205>



© 2022 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 06 Nov 2022.



[Submit your article to this journal](#)



Article views: 329



[View related articles](#)



[View Crossmark data](#)



Citing articles: 2 [View citing articles](#)

Metagoverning through intermediaries: the role of the Norwegian “Klimasats” Fund in translating national climate goals to local implementation

Fay M. Farstad^a, Anders Tønnesen^a, Ingrid Christensen^a, Bård Sødal Grasbekk^{b*} and Kristiane Brudevoll^b

^aCICERO Center for International Climate Research, Oslo, Norway; ^bInsam, Drammen, Norway

ABSTRACT

There is little knowledge of how policymakers manage governance networks (“metagovern”) within climate policy and especially at non-executive levels of public management. One strategy to metagovern is through using intermediary actors such as funding bodies. However, as novel actors within climate governance, such “climate intermediaries” are under-researched. We address these gaps by exploring the metagovernance through an intermediary actor, namely the Norwegian “Klimasats” Fund. We find that the logic of funding bodies lends itself to “carrots” as opposed to “sticks”, weakening the potential for transformation. Funding bodies can also increase existing differences in climate action between larger and smaller local authorities. However, funding bodies have a beneficial bi-directional functionality, incentivising local innovation whilst feeding lessons both up to and across government. Funding bodies also have the power to make local actors into intermediaries in their own right and can influence policy discourses. Thus, in assessing metagovernance at the non-executive level and using intermediary actors such as funding bodies, we reveal significant challenges, but also surprising opportunities, for the low-carbon transition.

ARTICLE HISTORY

Received 16 May 2022
Accepted 27 October 2022

KEYWORDS

Climate policy;
metagovernance;
intermediary actors; funding
bodies; Norway

Introduction

Mirroring the governance trend in public policymaking, where decision-making and implementation take place in networks of public, private and semiprivate actors, climate policymaking is increasingly characterised by polycentricity (Jordan et al. 2018). Although policymaking at the national, EU and international level remain central to climate action, the last decade has seen a rapid growth in the number and types of actors seeking to influence climate policy. This “polycentric turn” (see Selin and VanDeveer 2020) in climate governance has increased climate action at the non-

CONTACT Fay M. Farstad  fay.farstad@cicero.oslo.no  CICERO Center for International Climate Research, Postboks 1129 Blindern, Oslo 0318, Norway

*Presently at the Association of Norwegian Architects

© 2022 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

executive level such as at the local, city and regional levels, as well as stronger engagement from non-state actors such as civil society, businesses, and local community groups (Bäckstrand et al. 2017; Brulle 2018). In response to the increasingly polycentric nature of climate policymaking, climate governance networks – i.e. networks of interdependent actors that contribute to the production of public governance – have mushroomed. Governance networks are well-adapted to solve complex policy problems. Yet, to ensure that governance networks operate effectively, metagovernance – described as the governance of governance – is essential (Sørensen and Torfing 2009). However, there is a lack of in-depth studies of how politicians and public managers cope with their new roles as metagovernors (Sørensen and Torfing 2009, 256), especially within the climate policy field (e.g. Hofstad et al. 2021, 1) and at lower or non-executive levels of public management (Goldsmith and Eggers 2004; Sørensen 2007; Sørensen and Torfing 2009).

The use of *intermediary actors* is an increasingly popular strategy to manage governance networks (“metagovern”) and translate national goals into tangible or local level action. Such “intermediaries”, can be conceptualised in different ways depending on the scholarly focus of studies (Hodson, Marvin, and Bulkeley 2013, 1404; Kivimaa et al. 2019). We here follow the definition of the Special Issue (Tobin, Tosun, and Farstad *forthcoming*) and define climate intermediaries as “go-betweens”. These are “actors that are situated between the local and national or global, and/or who act directly or indirectly to affect the behaviour of stakeholders or to shape policy goals” (Tobin, Tosun and Farstad, *forthcoming*, 3). Intermediary actors have been proposed as key catalysts speeding up sustainability transitions (Hodson, Marvin, and Bulkeley 2013). However, there is an asymmetry between the increasing number and types of intermediaries and the attention these have received in the climate governance literature (Tobin, Tosun, and Farstad *forthcoming*). One example is the increasing establishment and use of funding bodies to incentivise and coordinate climate innovation and local action. Such funding bodies act as intermediary actors, translating overarching national climate goals to concrete “on-ground action” (Bache et al. 2015). However, being relatively nascent nodes in the climate governance system, such climate intermediaries are significantly under-researched (for exceptions, see Howells 2006; Baker and Eckerberg 2007; Hodson and Marvin 2012; Polzin, von Flotow, and Klerkx 2016; Obydenkova, Rodrigues Vieira, and Tosun 2021).

We address the lack of research on funding bodies as climate intermediaries by exploring the metagovernance of climate governance networks through an intermediary actor – the Norwegian Climate Investment (“Klimasats”) Fund. The Klimasats Fund was established in 2016 to incentivise local climate initiatives, experimentation, and facilitate climate cooperation between various actors. The scheme, which is administered by a team within the Norwegian Environment Agency, had by the end of 2021 financed over 1500 projects and spent over €113 million. By analysing the extent to which the fund is an effective metagovernor for enacting transformative change, we highlight the possibilities and limits of metagovernance at the non-executive level and the use of climate intermediaries such as funding bodies for the low-carbon transition.

The article is structured as follows. The first section outlines the metagovernance and intermediaries literature, which theoretically underpins our research questions and analysis. The second section describes the organisation and structure of the fund and

the third section outlines our methodological approach. The fourth section analyses the findings, before the final section discusses the research questions and summarises key conclusions.

Theoretical perspectives

Metagovernance

Our analysis springs partly from the governance, and more specifically the metagovernance literature (Sørensen and Torfing 2009). Although the governance literature has propounded the concept of “governance without government” (Rhodes 2006), more recent works have emphasised the enduring role of government (Torfing and Sørensen 2014). However, the government’s role has been adapted to more complex and rapidly changing environments (Capano, Howlett, and Ramesh 2015; Torfing 2016), increasingly using softer and more flexible governing tools (Blomqvist 2016). Governance therefore frequently proceeds through negotiations and interactions between relevant and affected actors, or rather *governance networks*. Governance networks have been described in various ways, such as informal governance arrangements, partnerships, co-governance, deliberative forums, advisory boards or policy task forces. We follow the definition of Sørensen and Torfing (2009, 236) by understanding a governance network to be:

A stable articulation of mutually dependent, but operationally autonomous actors from state, market and civil society, who interact through conflict-ridden negotiations that take place within an institutionalised framework of rules, norms, shared knowledge and social imaginaries; facilitate self-regulated policymaking in the shadow of hierarchy; and contribute to the production of “public value” in the broad sense of problem definitions, visions, ideas, plans and concrete regulations that are deemed relevant to broad sections of the population.

As Sørensen and Torfing point out, governance networks deserve scholarly attention because they transform the form and functioning of government and because they create new spaces of governance by breaking down the traditional dichotomies of state and society; public and private; local and global (2009, 236). However, governance networks are not without their problems or limitations, hence they must be “metagoverned” to ensure they are effective (Jessop 2002; Sørensen and Torfing 2009). “Effective” can have different meanings, but for the purposes of networked governance, Sørensen and Torfing (2009, 242) point to the networks’ capacity to produce an understanding of the policy problem, generate feasible policy options that match this understanding, avoiding excessive costs, ensuring smooth and legitimate implementation and flexible adjustment in the face of changing conditions, and creating favourable conditions for future cooperation. Sørensen and Torfing (2009, 246–247) highlight four policy tools that elected politicians and public managers, or rather metagovernors, can employ to enhance the effectiveness of networked governance:

1. *Network design*: aiming to influence the scope, character, composition and institutional procedures of the network;
2. *Network framing*: seeking to determine the political goals, fiscal conditions, legal basis and discursive storyline of the network;

3. *Network management*: attempting to reduce tensions, resolve conflicts, empower particular actors and lower the transaction costs in networks by providing different kinds of material and immaterial inputs and resources;
4. *Network participation*: endeavouring to influence the policy agenda, the range of feasible options, the premises for decision-making and the negotiated policy outputs.

The first two metagovernance tools are “hands-off” instruments, whilst the latter two are “hands-on”. The choice of “hands-off” and “hands-on” metagovernance varies depending on the policy issue and how closely related the policy area is to the core functioning of the state (Sørensen and Torfing 2009, 247). Avoiding excessive or insufficient metagoverning and striking the right balance between “hands-off” and “hands-on” metagovernance are key dilemmas for public metagovernors (Kooiman 1993; Sørensen 2007). Importantly, Hofstad et al. (2021, 1) highlight that scant attention has been paid to the effort to lead (or metagovern) collaborative processes for the green transition in the academic literature (Hofstad et al. 2021, 1).

Sørensen and Torfing underline that “metagovernance is an inherently imperfect strategic practice” (2009, 253) and one that requires a skilful handling of a variety of dilemmas and strong strategic competencies (2009; Goldsmith and Eggers 2004, 157). Such strategic competencies are not just needed by executive public managers, but also increasingly at lower levels of public management (Goldsmith and Eggers 2004; Sørensen 2007; Sørensen and Torfing 2009). Our analysis therefore also builds on insights from work on multilevel governance networks, which have been proposed as mechanisms for governments to solve complex policy problems and influence local processes (Bulkeley and Betsill 2005; Hovik and Hanssen 2015). Lower-level public management can be key in translating meta-policies (O’Toole 2004) or overarching national goals into more specific policies. To Bache et al. (2015), the translation of policy objectives into tangible measures on the ground is essential for preventing meta-policy from becoming symbolic and toothless locally. They highlight the need to identify an intervening stage between “objectives” and “settings”. The meta- and multilevel governance literatures therefore point to the important role of lower-level public management as an intermediary actor.

Intermediaries

Our analysis also springs from the nascent literature on intermediary actors. As outlined in the introduction, lower levels of government and non-state actors can be considered as increasingly vital “nodes” within a polycentric network. Here, independent actors overlap, interact and adjust within a context of overarching rules (Jordan et al. 2018). However, the literature exploring the roles of these intermediaries has been unevenly distributed, focusing primarily on established actors such as ENGOs rather than the plethora of new and innovative climate intermediaries (Tobin, Tosun, and Farstad *forthcoming*). Particularly evident is the gap in the literature concerning climate intermediaries that operate between the state and individuals, such as local communities, religious groups and funding bodies. Some of these climate intermediaries, for example religious groups, do not exist *because* of their commitment to climate action, but engage with the issue for other reasons (and as a result have often been overlooked by research). Other climate intermediaries, for example bespoke funding bodies, have

been purposefully established to deal with climate change, but are such recent innovations within climate governance that little research has been conducted on them. A growing body of literature has examined the roles of economic instruments or funding bodies to deal with sustainable development in the broad (e.g. Baker and Eckerberg 2008; Eckerberg et al. 2020) although much less attention has been devoted to climate change specifically (for exceptions, see Howells 2006; Baker and Eckerberg 2007; Hodson and Marvin 2012; Polzin, von Flotow, and Klerkx 2016; Obydenkova, Rodrigues Vieira, and Tosun 2021).

According to Abbott, Levi-Faur, and Snidal (2017), intermediaries stand between policymakers and their policy targets and aim to change their respective behaviour by interacting with them (also see Schneider and Ingram 1993). Funding bodies have the potential to be influential intermediary actors because they can provide incentives to both policy makers and policy targets to change their behaviour in a certain manner (Howells 2006, 717). For example, funding bodies can intermediate between international and national actors and policy goals (e.g. the European Bank for Reconstruction and Development, Obydenkova, Rodrigues Vieira, and Tosun 2021), between national and sub-national interests (e.g. the Greater Manchester Climate Agency (Hodson and Marvin 2012) or the Local Investment Programme for Ecological Sustainability in Sweden (Baker and Eckerberg 2007)) and incentivise climate innovation in the private sector (Polzin, von Flotow, and Klerkx 2016). Such intermediaries can work bi-directionally, e.g. the state can seek to influence policy and outcomes by incentivising local innovation through these funding bodies, and in turn the funding bodies can feed back lessons to the state, thus affecting policy-making (Howells 2006).

Intermediaries are incorporated into a policy process because they possess relevant characteristics or capacities, which Abbott and Snidal (2009) assign into four categories. These categories are summarised by Abbott, Levi-Faur, and Snidal (2017) as *operational capacity* (e.g. to deliver services or facilitate the policy targets' compliance with policy), *knowledge* (e.g. how to facilitate the implementation of policy), *independence* from policymakers and/or policy targets, and the ability to increase the *legitimacy* of policymaking by aggregating and articulating the interests of members or stakeholders. Yet to successfully enact change, intermediaries must align their strategies with the context in which they are operating. However, little is known about intermediaries' strategies, influence and how these actors overlap, coordinate, cooperate and compete with each other and other actors (Tobin, Tosun, and Farstad forthcoming). For example, Wolf et al. (2021, 1) highlight the need for in-depth research on intermediaries, especially on successful strategies for climate action. Similarly, Kivimaa et al. (2019, 12) point out the need for further empirical insight to identify "the most useful strategies (...) for supporting transformative change through intermediary actors."

Synthesising the metagovernance and intermediaries literatures

To help fill the above literature gaps, we conduct an in-depth case study of a particular intermediary, to explore the role and efficacy of such actors for metagoverning and climate action.

The Klimasats Fund exemplifies an intermediary structure translating national policy goals to “on-ground action”, and connects a range of different actors and agencies, businesses, citizens, and in some instances different municipalities. The fund possesses the key intermediary features as typologised by Abbott, Levi-Faur, and Snidal (2017), namely that the fund provides operational capacity by facilitating local level climate action and compliance with policy goals; that it possesses specialised knowledge on how to facilitate policy implementation; that it is (at least in theory) independent of the national and local governments; and that it has the ability to increase the legitimacy of climate policymaking by aggregating and articulating the interests of local actors. The fund also fits Kivimaa et al.’s description of a *regime-based transition intermediary* as the fund is tied through “institutional arrangements or interests to the prevailing socio-technical regime but has a specific mandate or goal to promote transition and, thus, interacts (often) with a range of niches or the whole system” (2019, 1068).

Transferred to the metagovernance literature, the fund helps govern a range of climate governance networks, which can be divided into three types. The first type is the loose network of local authorities (and their cooperating partners) that use the Klimasats infrastructure, e.g. by applying for or receiving funding, and participating in network or educational events. With state financing through the fund follows obligations for the receivers at the local and regional levels. For each project being realised, a direct link between the levels of government is established. The second type is the network established “up” to the national level to receive a mandate and transfer lessons from projects. The third type is the inter-agency network established by the fund to help select and shape projects and to feedback lessons horizontally. Unless otherwise specified, we focus on the first type of governance network, as this is the largest network, forms the core of the fund’s purpose, and provides the most insight into the fund’s role as a metagovernor. Importantly, in line with the metagovernance literature, the fund is designed to empower certain actors, reduce tensions and transaction costs, and influence the policy agenda through being in close interaction with the receivers of funding. How effectively the fund has achieved these goals, however, is an unanswered question. We therefore explore the following research question (RQ):

RQ1: To what extent is the Klimasats Fund an effective metagovernor for enacting transformative change?

To provide insight into whether metagoverning through an intermediary actor such as a funding body is a useful strategy for supporting transformative change, we divide this research question into two more tangible and subsidiary research questions:

RQ1.1: To what extent is the Klimasats Fund organised in a way that promotes local climate action? And,

RQ1.2: To what extent does the Klimasats Fund contribute to achieving Norway’s climate mitigation target?

With these research questions, we shed light on the possibilities and limits of metagovernance at the non-executive level and the use of climate intermediaries such as funding bodies for the low-carbon transition.

The Klimasats Fund

Norway faces a steep challenge in reaching its emissions reduction goal of –50–55% from 1990-levels by 2030. Norwegian domestic emissions have only reduced by 4,5 per cent between 1990 and 2021 (SSB 2022), primarily because of a booming petroleum sector, but also because Norwegian electricity supply is essentially already decarbonised due to the prominence of hydropower. Although Norway has met its international climate obligations largely through flexible mechanisms (e.g. the Clean Development Mechanism under the Kyoto Protocol or the EU ETS), there has been an increasing focus on reducing domestic emissions following the Paris Agreement in 2015 (Farstad et al. 2022). However, national goal achievement is closely tied to decision-making at the local level. Similarly, local and regional actions are framed by goals, financing and regulatory structures decided by the state level. In a European context, Norway is among the countries with most tasks devolved to municipalities (MLGM 2014). Thus, to understand climate policy, we not only need to assess the formal powers of local authorities, but also whether they are equipped with the necessary instruments and resources. Westskog et al. (2018) point to the lack of economic resources for the municipalities as a central barrier for climate action. Given the numerous statutory tasks of municipalities, among others relating to education and health care, climate measures are often beyond what local authorities can prioritise through their ordinary budgets.

To remedy this situation, the Klimasats Fund was established in 2016. The fund is administered by a dedicated team within the Norwegian Environment Agency. This governmental support scheme seeks to promote climate measures in county authorities, municipalities and (inter)municipal companies. The scheme has two main goals: (1) To promote greenhouse gas-reducing measures, and (2) facilitate a transition to a low-carbon society. An additional aim is to help municipalities strengthen their role as a community developer and be a driving force facilitating climate cooperation between various actors. Between 2016 and 2021, the fund granted funding to more than 1500 projects (of which 136 have been cancelled). The total sum granted is approximately €113 million.

Methodology

We analyse the role and efficacy of the fund through in-depth studies of five projects that have received funding. The more than 1500 Klimasats projects vary extensively in terms of size, scope and organisation. Hence, the in-depth studies do not aim to be representative of the larger universe of Klimasats projects. Instead, their selection is based on a mix of characteristics of the municipalities they are attached to and characteristics of the projects themselves. Concretely, case selection is based on variation within four overall criteria (see also Table 1): **1. Differing contexts** – involving both larger city municipalities involved in several Klimasats projects and rural municipalities involved in few, **2. Differing policy areas** – encompassing food waste, circular economy, transport and agriculture, **3. Differing organisational structure** – involving cases with single- and multiple municipal ownership and varying involvement of the private sector, and **4. Differing achievements** – involving both cases highlighted by Klimasats as particularly interesting or innovative in terms of cooperative models or objectives reached, and a case

Table 1. Overview of projects studied in-depth.

Project	“Circular Kristiansand”	“The institutionalisation of climate action in the new Kristiansand municipality”	“Reduced food waste and climate-friendly menus”	“The skilled farmer”	“Smart travel”
Awarded Funds	€47 718 in 2020	€35 535 in 2020	€44 469 in 2017	€139 602 in 2018 and €141 734 in 2019	€25 344 in 2018
Project owner	Municipality of Kristiansand	Municipality of Kristiansand	Municipality of Trondheim	Municipality of Østre Toten ^a	Municipality of Ringebu
Policy Area	Circular Economy (CE)	Climate budget and leadership	Food waste	Agriculture and Forestry	Transport
Project aim	Establish a temporary position to promote and coordinate circularity externally and within the organisation.	Improved organisation of the climate work within the new municipality, after merging three municipalities in January 2020. The project consisted of workshops to increase the organisation’s competency on climate.	Increase knowledge re. climate-friendly choices for purchasing and consuming food. Measures included food waste analyses and testing new organisational procedures to improve coordination and awareness.	For the municipalities to work together and with farmers to increase food production while reducing negative externalities like emissions, runoff and increase carbon capture.	Establish a foundation for improved public transport services in a rural area with a large number of ski tourists. The idea was to charge a surplus on certain goods sold in the area, mirroring “tourist taxes” in other countries, to fund free public transport.
Performance	According to their own report, the project has improved collaboration, competence, and awareness of CE, and contributed to integrate CE in their climate strategy.	The project resulted in a consultancy report with recommendations for how the municipality could strengthen the institutionalisation of these issues.	Trondheim reports that the project mobilised key municipal actors and resulted in a political decision to reduce food waste by 50% by 2025. –750 tonnes CO ₂ -eq. are expected annually. Project results will also be used to develop a holistic food strategy.	To ensure progress, a project leader has been engaged to follow up initiatives, supervise farmers and help establish pilot farms, where energy and climate calculators will be used to measure effects.	A collaborative evaluation of local bus services was conducted, and new models for financing tested. The pilot gained attention from national and regional policymakers keen to try similar solutions. Cooperation between government and businesses was strengthened, incentivising other innovations, e.g. a bike renting scheme.
Status	Completed They have decided to use internal resources to continue the	Completed	Completed	Ongoing as of April 2022	Completed The pilot study did not lead to an uptake of the new public transport

(Continued)

Table 1. Continued.

Project	“Circular Kristiansand”	“The institutionalisation of climate action in the new Kristiansand municipality”	“Reduced food waste and climate-friendly menus”	“The skilled farmer”	“Smart travel”
	project position for another year.				model, largely due to the legal difficulties of adding a surplus charge to local goods.

^aOriginally a joint project between the municipalities of Gran, Lunner and Jevnaker. In 2019 the project was expanded to include the municipality of Østre Toten as the project owner.

which had not been implemented after the initial conceptual phase. For each project, document analyses were conducted, with key documents being applications, grant letters and project reports. We conducted 25 semi-structured interviews between December 2020 and August 2021 relating to each of the projects and the fund. Central informant groups were municipal and county authority officers, Klimasats Fund employees and senior civil servants in relevant ministries (see Appendix 1). Emphasis was placed on interviewing both people affiliated with the concrete projects and people viewing them more from the outside. In each interview two researchers participated. Notes were made during the interviews and sent to the interviewees for approval. Post-interview, researchers also made a note of key themes emerging from the interview, which were collated into one document for synthesis and analysis, enabling us to respond to our research questions.

Analysis

As described above, Sørensen and Torfing (2009, 246–247) highlight four metagovernance tools that can be applied to enhance the effectiveness of networked governance, namely *network design*, *network framing*, *network management* and *network participation*. In this section, we deal with each of these tools in order to assess the extent to which the Klimasats Fund is organised in a way that promotes local climate action (RQ1.1) and to what extent the fund contributes to the achievement of Norway’s climate mitigation target (RQ1.2). We start by focusing on the latter two policy tools, i.e. network management and network participation, which are traditionally performed “hands on”, as these are the most pertinent policy tools to assess RQ1.1. We subsequently assess the former two policy tools, i.e. network design and network framing, which are traditionally performed “hands off”, which are the most pertinent policy tools to assess RQ1.2. In response to RQ1.2, it is never straightforward to evaluate network outcomes, as networks produce results of many kinds – some tangible, others intangible. As several local authorities report being unable to measure the emissions reductions resulting from their projects, we are naturally unable to assess the precise emission reductions produced by the fund. As such, we here focus on aspects of climate governance which the academic literature points to as being central in reducing emissions.

Network management

Network management should attempt to “reduce tensions, resolve conflicts, empower particular actors and lower the transaction costs in the networks by providing different kinds of material and immaterial inputs and resources” (Sørensen and Torfing 2009, 247).

In terms of *reducing tensions and resolving conflicts*, the fund has incentivised closer and more cross-sectoral cooperation within the local authorities themselves. For example, in the cities of Trondheim and Kristiansand, we observed that the projects worked as a “door-opener” for the climate contacts or teams into other units of the local authority. As noted by a civil servant in Kristiansand:

The fund increases the opportunities for good dialogue and collaboration on projects across sectors and branches of the local authority. The support scheme is beneficial when climate advisers want to meet colleagues from other areas and discuss specific collaborative projects. Having financial resources to offer is always an advantage, as lack of finances is often a barrier to working on new solutions and projects across administrative units.

Furthermore, several interviewees pointed out that the projects made it easier to reach out to and in turn be contacted by other units of the local authority, and that the frequency of contact increased. For example, in Trondheim, the issue of food waste had fallen between the cracks as it related to several parts of the local authority organisation. As explained by a local civil servant:

We have a political goal of 50% reduction in food waste by 2030 (...). Without Klimasats funding I do not think there would have been any measures. There was no one really owning the goal – it was placed in the climate section, but it involves so much else as well (...). However, since we started working on it, we now feel that we own the goal.

The Trondheim interviewees pointed out that the project on food waste had served to create an arena for cooperation and dialogue, and established a system for awarding responsibility and addressing the issue. The fact that the work has been extended underlines the success in operationalising the local authority’s food-waste goal and linking it to strategy and action locally.

The fund has also helped reduce tensions and resolved conflicts between the local authorities and external actors. For example, in the Ringebu municipality, interviewees explained how receiving funding for the “Smart travel” project served as a “stamp of quality” for their idea, thus helping to get more business actors involved. One interviewee even claimed that the recognition from the fund was at least as important as the actual funding, for these reasons. The point was echoed in the other projects, with interviewees arguing that receiving funding created positive publicity for the climate work of the local authority, thus making it more attractive for private investment. Furthermore, the multi-municipality project “The skilled farmer” also contributed to new ways of cooperating between different municipalities. Here, the project included three municipalities who already had formalised cooperation on agriculture and in addition a municipality with no such established cooperation. Similar trends can be observed in other municipalities, where Klimasats projects incentivises cooperation between municipalities working on similar issues. As such, the fund has contributed to making local authorities intermediaries in their own right, helping to connect them with surrounding actors and setting them up as “go-between” between the fund and actors other than recipients of funding.

The above demonstrates how the Klimasats Fund *empowers particular actors*. Not only does the fund open doors for the climate change officer or team in the local authority and turn local authorities into intermediaries in their own right, but, critically, it also empowers the local authorities to take concrete climate action. As one of the fund's employees explains: "The fund makes it possible for local authorities to start somewhere. That is the most important thing, that you get going. Then this will have a snowball-effect". The representatives from the local authorities argued that their projects would not have been possible without the funding provided, which makes it feasible for cash-strapped local authorities to prioritise climate action. The funding also allows the receivers to be innovative and take risks in a way that would have been difficult within the ordinary frames of their budgets. The "Smart travel" project in Ringebu exemplifies this, involving the conceptualisation of a new way of financing public transport and opening up complex questions of public/private ownership and judicial challenges.

Further, the fund empowers network actors by *reducing transaction costs*. The fund places a strong emphasis on learning, cooperation and communication between actors. For example, several interviewees praised the fund's transparent webpage, listing each project that has ever been funded, including application documents and final reports, thus working as a significant source of inspiration and learning for local authorities searching for measures to reduce their emissions. Furthermore, the employees of the fund pointed out that there are strict requirements for recipients of funding to partake in cooperation and communication activities, especially on emerging topics with relevance for all local authorities, such as using public procurement for climate purposes. As underlined by a civil servant in Trondheim: "The fund emphasises other factors than just emission cuts, such as transfer of value to other municipalities". The fund also organises platforms for learning, such as a Facebook group for people working with climate mitigation or adaptation in local or regional government (with 2200 members) and network meetings with the goal of transferring lessons between local, regional and national actors.

Moreover, the majority of interviewees highlighted the importance of short lines of communication between local authority representatives and employees of the fund. For example, the employees of the fund pointed out that the Environment Agency's suggestion to remove Klimasats case workers' telephone numbers from the Environment Agency webpage and instead streamline communication met with fierce opposition. They stressed the benefits of local authorities being able to pick up a phone and talk to a case worker. Though they admitted that this was a more cumbersome way of working, the benefits were twofold, they argued. Firstly, the close dialogue with local authorities meant that case workers got a deeper understanding of the issues at local authority level and could therefore better advise on the design of applications and projects. Secondly, the resultant closer relationships generated significant learning within the fund, which was in turn transferred to other networks, such as to the wider Environment Agency and between the Environment Agency and the Ministry of Climate and Environment (exemplifying the second type of network). The senior civil servants interviewed highlighted the benefits of learning from the local authorities' innovative projects and experiences, and pointed out that politicians appreciated being presented with examples of possible measures for national implementation. For example, pilot projects relating to zero-emission building sites in Trondheim and Oslo and low-emission zones for

transport in the city of Bergen had allowed the government to trial and learn from measures that they had been hesitant to apply nationally.

The fund also emphasises short lines of communication horizontally with other agencies or ministries (exemplifying the third type of network). An employee of the fund outlined their broad network in this respect:

We have a close dialogue with others interested in the field, for example the planning department in the Ministry of Agriculture and Food. When we process applications we ask “What do you think? Do you have any objections?” If they are supportive they can stipulate conditions for awarding funding. We also cooperate closely with the Norwegian Agency for Public and Financial Management (DFØ) who are working to increase competency on public procurement. (...) Recipients of funding have to participate in DFØ webinars and DFØ can get involved in the projects. We also run some projects past the Norwegian Public Roads Administration.

Network participation

Network participation “endeavours to influence the policy agenda, the range of feasible options, the premises for decision-making and the negotiated policy outputs” (Sørensen and Torfing 2009, 247). Although this is described as a “hands-on” policy tool in the literature, the Klimasats Fund has consciously taken a “hands-off” approach to network participation, underpinned by a philosophy that climate action should be incentivised from the bottom-up.

Several interviewees argued that a top-down approach would be demotivating for local authorities and lead to less of the desired culture change and innovation. This is a key reason why there have been relatively few guidelines or restrictions on what local authorities can apply for funding for. To the extent that the fund influences the type of projects pursued, an employee of the fund described the process of judging applications:

[We] try to think holistically, balancing between different sectors and types of projects, so that not all the funds go to food-waste projects for example. Then we assess in which areas there is a larger need for development or where you might see a transmission effect.

Overall, however, the fund’s employees stress that they have refrained from being too prescriptive in their funding guidelines, both to motivate local authorities and incentivise bottom-up transformation, and to incentivise a wide range of innovative projects that can be a source of learning.

Innovation is not a prerequisite for funding, however, and a sufficient requirement is often that a measure is new to that particular local authority. Especially in the early years of the fund, the transformation goal underpinned a relatively low bar for receiving funding. Over time, however, as local authorities have increased their climate action, the fund has made funding criteria stricter. For example, whereas early applications tended to relate to measures such as installing charging infrastructure for electrical vehicles; as this has gained critical mass, such applications are now usually declined. The exception is in regions, particularly in the north of Norway, and local authorities where climate action is significantly less developed. As such, the fund strategically incentivises increased ambition and innovation in certain local authorities, whilst also seeking to ensure that no geographic areas are left behind.

The fund also has significant flexibility to decide on the portfolio of projects according to the broad government mandate. There are some exceptions to this rule, such as the government ringfencing of €16.6 million for projects on zero-emission ferries. A senior civil servant described this exception relating to a strong political desire to develop technology and address a relatively large emissions source in Norway, which is dependent on speedboats to ferry people and cars across many of its fjords.

Network design

Network design “aims to influence the scope, character, composition and institutional procedures of the networks” (Sørensen and Torfing 2009, 246). Particularly relevant are the dimension of scope and composition, as these were contentious issues in the case study.

In terms of the *scope* of Klimasats projects, nearly all the interviewees noted that the projects funded tended to relate to “carrots” rather than “sticks”, though with mixed messages as to whether this was positive or negative. Local authorities themselves stressed the benefits of a “carrot” approach to incentivising local climate action, as this was more motivating for the local authority, citizens and surrounding businesses. Government interviewees, however, pointed out that the most effective mitigation measures were often those that required a “stick”, such as rules and regulations.

Likewise, the *composition* of local authorities receiving Klimasats funding was criticised. Some interviewees pointed out that, even though the fund incentivises smaller local authorities to apply for funding, in reality they often have little capacity to do so, thus increasing the differences between larger and smaller local authorities in terms of innovation and progress in reducing emissions. Some expressed concern that the fund was moving away from “picking the low hanging fruit” in smaller local authorities and becoming more elitist in its focus on innovative projects that only large local authorities would be able to pursue. These observations underline the findings of the Ministry of Local Government and Modernisation (2019), revealing a general tendency of marginal participation by small and decentralised municipalities in state incentive programmes, including the Klimasats Fund.

Network framing

Network framing “seeks to determine the political goals, fiscal conditions, legal basis and discursive story-line of the networks” (Sørensen and Torfing 2009, 246).

As outlined above, the dual political goals of the fund is to incentivise climate change mitigation and transformation at the municipal level. The duality of purpose is conscious, as the Environment Agency recognises that not all actions taken by local authorities will necessarily lead to large or measurable emissions reductions. As such, projects seeking to change culture and ways of working are also prioritised, as this should theoretically contribute to climate mitigation in the long run. Moreover, the emphasis on transformation is why the fund increasingly stresses the need for applications to be supported by local authority leadership in order to receive funding, as this ensures embedding within the wider municipal organisation. The long-term political goal is naturally to remove the need for Klimasats funding and integrate climate action

into regular local authority working and budgets. Interviewees highlighted how the fund partly contributes to this, as the projects help demonstrate early results from pilots and thus make the case for budget inclusion. For example, the representatives from Trondheim reported ordering less food and saving costs. Others argued that work had progressed from being about single projects to being put into context with other activities in the local authority. Furthermore, employees of the fund pointed out how applications are increasingly being embedded within the local authority leadership and that ambitions have increased over time.

However, some interviewees argued that it was naïve to believe that the first and simple climate measures implemented in local authorities would lead to proper culture change or upscaling of ambition. Much more was needed than simple project funding, they maintained, particularly in the smallest local authorities. Several interviewees complained that the fund financed innovation and the upstart of pilots, but not their continuation, meaning several promising initiatives floundered. Moreover, in one interview it was pointed out that projects tended to “optimise established practices rather than questioning or changing them”, for example optimising farming practices instead of problematising or reducing the production of red meat. Real transformation was therefore difficult with such a relatively small policy tool as Klimasats funding, they argued. Likewise, one interviewee pointed out that not all projects were climate positive in an overall sense, for example building bike lanes or climate-friendly housing on peatlands, which store a significant amount of carbon. Overall, therefore, the framing of the Klimasats Fund calls into question its ability to actually achieve its secondary goal of local transformation.

The challenge of achieving emissions reductions and transformation is also underpinned by the fund’s *fiscal conditions*. On the one hand, the fund requires a certain amount of match-funding from the local authority. The amount varies depending on the scale of the project, but the main purpose is to integrate the project into local authority budgets and agendas. Even if matched with an equal amount of local authority funding, however, the overall amount is not significant in comparison to other policy programmes. In the grander scheme of both local authority and government spending, the Klimasats funding is miniscule. The funding has also varied significantly over time, with uncertainty as to whether the fund would be continued and at what level of funding. This uncertainty also diminishes efforts to institutionalise climate action at the local authority level. Moreover, despite the continuation of the fund being one of six demands made to the government by the climate change directors of Norway’s largest cities in an op-ed written during the 2021 General Election campaign (NRK 2021), the government only awarded the fund €24 million in the 2022 budget. Divided by Norway’s 356 municipalities, this does not stretch far.

Despite the lack of consensus on the fund’s dual goal achievement, there was nonetheless agreement that the fund has helped *determine the discursive story-line of the network*, by strengthening the position of local authorities as actors within climate policy and helping to raise the debate about what their role should be. Local authorities are closer to citizens than the national government and also have responsibility for planning policy. Some interviewees therefore argued that there was a mismatch between the important role of local authorities and the responsibilities and funds handed down to them by national government. Senior civil servants admitted that there was an

ongoing principled discussion about the role of local authorities, and that their role in the low-carbon transition was unclear. In the white paper “Climate Plan for 2021–2030”, where the conservative coalition government under Prime Minister Erna Solberg set out how to achieve Norway’s 2030 climate target, there were few and vague mentions of the role of local authorities. This despite the fact that the underlying inter-agency report which reviewed potential measures the government could implement in order to reach its target, devoted local authorities significant attention with a separate chapter. When asked why the focus on local authorities in the underlying scientific report was not mirrored in the white paper, respondents provided two reasons. Firstly, as pointed out by a senior civil servant, the focus of the white paper was “on large measures that significantly reduce emissions in terms of tonnes of CO₂ by 2030”, with measures in local authorities being considered too small, fragmented and diverse to achieve this. Secondly, the senior civil servant admitted that there was little desire to start a debate about the division of responsibility for climate policy between the national and local level, which would result in a discussion about increasing local-authority budgets. Moreover, they pointed out that there was little demand from local authorities themselves for increased responsibility and requirements in this area. Regardless of either the government’s or local authorities’ wishes, and whether intentional or not, the fund has undoubtedly put the question of the role of local authorities for Norway’s low-carbon transition on the agenda.

Discussion and conclusion

The starting point of our analysis was the increasingly polycentric nature of climate governance. Two important knowledge gaps were identified in this respect, relating to how the plethora of new climate governance networks are metagoverned, especially at lower or non-executive levels of public management, and how new and under-researched climate intermediaries such as funding bodies help fill this metagovernance role. By attempting to answer our overall research question, i.e. *the extent to which the Klimasats Fund is an effective metagovernor for enacting transformative change*, we have assessed the possibilities and limits of metagovernance at the non-executive level and the use of climate intermediaries such as funding bodies for the low-carbon transition.

In response to our first subsidiary research question, i.e. the extent to which the Klimasats Fund is organised to promote local climate action (RQ.1.1), we have found that the fund does indeed display a range of governance tools conducive of effective metagovernance. Most pertinent in this respect were the tools *network management* and *network participation*. In terms of *network management*, we have seen examples of the fund being “hands on” in reducing tensions and resolving conflicts through incentivising internal and external dialogue and cooperation. In improving the latter, the fund has in fact turned several local authorities into intermediaries in their own right. The fund has also empowered local authorities by providing funding for climate action and allowed them to take larger risks than would otherwise have been accepted within regular budgets. In addition, the fund has reduced transaction costs by emphasising learning and short lines of communication, both between local authorities, and between the fund and ministries and government agencies. In terms of *network participation*, despite this also being defined as a “hands on” policy tool in the metagovernance

literature, the fund had consciously been “hands off” by not being overly prescriptive in their funding criteria, with the idea being that this incentivises increased experimentation and transformation at the local level. Overall, therefore, and echoing the intermediaries literature, the fund has used its operational capacity, specialised knowledge, independence and legitimacy (see Abbott and Snidal 2009; Abbott, Levi-Faur, and Snidal 2017) to incentivise local action, innovation and cooperation. In fact, the management of the fund received almost universal praise from the interviewees. However, this does not necessarily equate to a large impact on emissions reductions or local transformation.

In response to our second subsidiary research question (RQ1.2), i.e. *the extent to which the fund contributes to the achievement of Norway’s climate mitigation target*, the results are less flattering. Most pertinent in this respect were the metagovernance tools *network design* and *network framing*. We find that the *network design* of the fund struggles to align with its dual goal of promoting greenhouse gas-reducing measures and facilitating a transition to a low-carbon society, as the scope of projects often fail to target high-impact measures (focusing on “carrots” rather than “sticks”) and the composition of the networks fail to sufficiently bring smaller local authorities into the fold. In terms of *network framing*, a key factor limiting the impact of the fund is its fiscal conditions. Although it is difficult to state the exact impact on emission reductions, given the relatively small sums of funding, the various Klimasats projects are likely to contribute in only a marginal way to Norway’s overall climate target. Moreover, the second goal of local transformation is intangible and difficult to measure. Furthermore, although the network framing has improved the integration of climate change work within local authorities, interviewees pointed out that established practices and ways of working are tweaked rather than questioned or transformed.

The balance between “hands-on” and “hands-off” metagovernance is also relevant in this respect. Although the fund displays elements of hands-on governance in its network management, the approach to the remaining three policy tools (network participation, design and framing) is hands-off. As hands-on metagovernance will be more common in policy areas that are closely related to the core functions of the state (Sørensen and Torfing 2009, 247), we can surmise that the significant level of hands-off governance demonstrates that climate change is yet to become a core function of the Norwegian state. Similarly, our case also shows us that local authorities have yet to become core actors in the climate policy process. The Klimasats funding has a split effect on recipients, either being met with gratitude for incentivising much-needed local climate action, or inciting frustration and resentment at local authorities being dependent on a grant scheme in order to address the climate crisis and perform their necessary functions. However, whether intentional or not, a key achievement of the fund has been to shed light on an important but historically overlooked actor within climate governance in Norway, namely local authorities, and highlight the contentious issue of the relative power and responsibility of the local versus the national level in climate policy. As pointed out by Sørensen and Torfing, governance networks result not only in concrete policy decisions, but “may also change the entire policy discourse, including the identity of the actors, their mutual perceptions of each other, and the norms and values upon which concrete policy decisions and policy regulations build” (2009, 236). Such a change is well under way in this case. In helping to bring the conflict between the national and local to the fore, the fund has therefore demonstrated that intermediaries such as

funding bodies need not necessarily be mere implementing instruments, but can serve as political ones too.

Although our qualitative analysis is based on only a selection of Klimasats projects, we have revealed several findings that are relevant to the broader literature on the role of funding bodies as intermediaries, and indeed economic climate policy tools in general. Firstly, although funding bodies allow recipients to take larger risks than they otherwise might have and thus incentivise innovation, we have revealed that the logic of funding bodies lends itself to “carrots” as opposed to “sticks”, thus weakening the hard-hitting potential of such intermediaries for effecting significant change. Moreover, such funds risk increasing existing differences between larger and smaller local authorities. Indeed, this latter finding mirrors that of Baker and Eckerberg (2007) who found that allocation of funding tended to be skewed towards environmental leader municipalities. Furthermore, the intermediaries literature argues that intermediaries can work bi-directionally (Howells 2006) – influencing policy and outcomes by incentivising local innovation on the one hand, and feeding up lessons from the local to the national level on the other. Our study confirms this, but also points to such intermediaries not simply feeding lessons up to the state in a vertical manner, but also across state agencies and ministries horizontally. Moreover, funding bodies can empower local actors and reduce tensions and transactions costs through incentivising cooperation, thus making local actors into intermediaries in their own right. This capacity to turn local actors into intermediaries in their own right points to the utility of intermediaries in climate governance, and is also a novel conceptual finding that should be added as a category as to why intermediaries are incorporated into the policy process (see Abbott and Snidal 2009; Abbott, Levi-Faur, and Snidal 2017). Furthermore, funding bodies need not be mere implementing tools, but in influencing policy discourses have the potential to be political tools as well. Hence, in assessing metagovernance at the non-executive level and using climate intermediaries such as funding bodies, we have revealed significant challenges, but also surprising opportunities for the low-carbon transition.

Note

1. To preserve anonymity we do not separate between the two or identify specific ministries/agencies.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The article builds on research funded by The Research Council of Norway, project no. 295789.

Notes on contributors

Fay M. Farstad is a Senior Researcher at CICERO specialising in comparative climate policy, political parties and EU politics.

Anders Tønnesen is a Senior Researcher at CICERO focusing on environmental policy-making and multilevel governance of land-use and transport-system development.

Ingrid Christensen is a PhD Candidate at the University of Oslo and CICERO, working on local climate policy and collaborative governance.

Bård Sodal Grasbekk was an Advisor at the urban development consultancy Insam, and currently works with local planning processes for the National Association of Norwegian Architects.

Kristiane Brudevoll is an adviser at the urban development consultancy Insam working on sustainability issues.

References

- Abbott, K. W., D. Levi-Faur, and D. Snidal. 2017. "Introducing Regulatory Intermediaries." *The ANNALS of the American Academy of Political and Social Science* 670 (1): 6–13.
- Abbott, K. W., and D. Snidal. 2009. "Strengthening International Regulation Through Transmittal new Governance: Overcoming the Orchestration Deficit." *Vanderbilt Journal of Transnational Law* 42: 501.
- Bache, I., L. Reardon, I. Bartle, G. Marsden, and M. Flinders. 2015. "Symbolic Meta-Policy: (Not) Tackling Climate Change in the Transport Sector." *Political Studies* 63: 830–851.
- Baker, S., and K. Eckerberg. 2007. "Governance for Sustainable Development in Sweden: The Experience of the Local Investment Programme." *Local Environment* 12 (4): 325–342.
- Baker, S., and K. Eckerberg, eds. 2008. *Pursuit of Sustainable Development: New Governance Practices at the Sub-National Level in Europe*. Oxford: Routledge.
- Bäckstrand, K., J. W. Kuyper, B. O. Linnér, and E. Lövbrand. 2017. "Non-state Actors in Global Climate Governance: From Copenhagen to Paris and Beyond." *Environmental Politics* 26 (4): 561–579.
- Blomqvist, P. 2016. "Soft and Hard Governing Tools." In *Handbook on Theories of Governance*, edited by C. Ansell, and J. Torfing, 267–281. Cheltenham, UK: Edward Elgar Publishing.
- Bulle, R. J. 2018. "The Climate Lobby: A Sectoral Analysis of Lobbying Spending on Climate Change in the USA, 2000 to 2016." *Climatic Change* 149 (3): 289–303.
- Bulkeley, H., and M. Betsill. 2005. "Rethinking Sustainable Cities: Multilevel Governance and the 'Urban' Politics of Climate Change." *Environmental Politics* 14 (1): 42–63.
- Capano, G., M. Howlett, and M. Ramesh. 2015. "Bringing Governments Back in: Governance and Governing in Comparative Policy Analysis." *Journal of Comparative Policy Analysis: Research and Practice* 17 (4): 311–321.
- Eckerberg, K., T. Bjärstig, M. Miljand, and I. Mancheva. 2020. "Devolving Power from the State: Local Initiatives for Nature Protection and Recreation in Sweden." *Local Environment* 25 (6): 433–446.
- Farstad, F. M., E. A. T. Hermansen, B. S. Grasbekk, K. Brudevoll, and B. van Oort. 2022. "Explaining Radical Policy Change: Norwegian Climate Policy and the ban on Cultivating Peatlands." *Global Environmental Change* 74: 1–10.
- Goldsmith, S., and W. D. Eggers. 2004. *Governing by Network – The New Shape of the Public Sector*. Washinton, DC: Brookings Institution Press.
- Hodson, M., and S. Marvin. 2012. "Mediating low-Carbon Urban Transitions? Forms of Organization, Knowledge and Action." *European Planning Studies* 30 (3): 421–439.
- Hodson, M., S. Marvin, and H. Bulkeley. 2013. "The Intermediary Organisation of low Carbon Cities: A Comparative Analysis of Transitions in Greater London and Greater Manchester." *Urban Studies* 50 (7): 1403–1422.
- Hofstad, H., E. Sørensen, J. Torfing, and T. Vedeld. 2021. "Leading Co-Creation for the Green Shift." *Public Money & Management*, doi:10.1080/09540962.2021.1992120.
- Hovik, S., and G. S. Hanssen. 2015. "The Impact of Network Management and Complexity on Multi-Level Coordination." *Public Administration* 93 (2): 506–523.

- Howells, J. 2006. "Intermediation and the Role of Intermediaries in Innovation." *Research Policy* 35 (5): 715–728.
- Jordan, A., D. Huitema, H. van Asselt, and J. Forster. 2018. *Governing Climate Change: Polycentricity in Action?* Cambridge: Cambridge University Press.
- Kivimaa, P., W. Boon, S. Hyysalo, and L. Klerkx. 2019. "Towards a Typology of Intermediaries in Sustainability Transitions: A Systematic Review and a Research Agenda." *Research Policy* 48 (4): 1062–1075.
- Kooiman, J., ed. 1993. *Modern Governance. New Government – Society Interactions*. London: Sage.
- Ministry of Local Government and Modernisation (MLGM). 2014. "Kriterier for god kommunes-truktur." Final expert group report. Oslo.
- Ministry of Local Government and Modernisation (MLGM). 2019. "White paper 5 (2019–2020)." Levende lokalsamfunn for fremtiden. Distriktsmeldingen.
- Norsk rikskringkasting (NRK). 2021. "Kronikk: Seks klimakrav til regjeringen: Hvem tar utfordringen?" Published online 16.08.21: https://www.nrk.no/ytring/seks-klimakrav-til-regjeringen_-hvem-tar-utfordringen_-1.15609349.
- O'Toole, L. 2004. "Implementation Theory and the Challenge of Sustainable Development: The Transformative Role of Learning." In *Governance of Sustainable Development: The Challenge of Adapting Form to Function*, edited by W. M. Lafferty, 32–61. Cheltenham, UK: Edward Elgar.
- Obydenkova, A., V. G. Rodrigues Vieira, and J. Tosun. 2021. "The Impact of new Actors in Global Environmental Politics: The European Bank for Reconstruction and Development Meets China." *Post-Communist Economies* 34 (5): 603–623.
- Polzin, F., P. von Flotow, and L. Klerkx. 2016. "Addressing Barriers to eco-Innovation: Exploring the Finance Mobilisation Functions of Institutional Innovation Intermediaries." *Technological Forecasting and Social Change* 103: 34–46.
- Rhodes, R. 2006. "Policy Network Analysis." In *The Oxford Handbook of Public Policy*, edited by M. Moran, M. Rein, and R. E. Goodin, 425–448. New York: Oxford University Press.
- Schneider, A., and H. Ingram. 1993. "Social Construction of Target Populations: Implications for Politics and Policy." *American Political Science Review* 87 (2): 334–347.
- Selin, H., and S. D. VanDeveer. 2020. "Climate Change Politics and Policy in the United States: Forward, Reverse and Through the Looking Glass." In *Climate Governance Across the Globe: Pioneers, Leaders and Followers*, edited by R. K. Wurzel, M. S. Andersen, and P. Tobin, 123–141. Oxford: Routledge.
- Sorensen, E. 2007. "Local Politicians and Administrators as Metagovernors." In *Democratic Network Governance in Europe*, edited by M. Marcussen, and J. Torfing, 89–108. Basingstoke: Palgrave Macmillan.
- Sørensen, E., and J. Torfing. 2009. "Making Governance Networks Effective and Democratic Through Metagovernance." *Public Administration* 87 (2): 234–258.
- Statistisk sentralbyrå (SSB). 2022. "Utslipp Til Luft." Accessed September 9, 2022 <https://www.ssb.no/natur-og-miljo/forurensning-og-klima/statistikk/utslipp-til-luft>.
- Tobin, P., J. Tosun, and F. M. Farstad. forthcoming. "Intermediating Climate Change: The Evolving Strategies, Interactions and Impacts of Neglected 'Climate Intermediaries'." *Special Issue of Policy Studies*, forthcoming.
- Torfing, J. 2016. "Metagovernance." In *Handbook on Theories of Governance*, edited by C. Ansell, and J. Torfing, 525–538. Cheltenham, UK: Edward Elgar Publishing.
- Torfing, J., and E. Sørensen. 2014. "The European Debate on Governance Networks: Towards a new and Viable Paradigm?" *Policy and Society* 33 (4): 329–344.
- Westskog, H., E. Selvig, C. Aall, H. Amundsen, E. S. Jensen, and E. Schøyen. 2018. "Potensial og barrierer for kommunale klimatiltak." CICERO Report; 2018:03.
- Wolf, P., J. Harboe, C. S. Rothbarth, U. Gaudenz, L. Arsan, C. Obrist, and M. van Leeuwen. 2021. "Non-governmental Organisations and Universities as Transition Intermediaries in Sustainability Transformations Building on Grassroots Initiatives." *Creativity and Innovation Management* 30 (3): 596–618.

Annex I – List of interviewees

Kristiansand

- Project workers (two), “Circular Kristiansand”, 17.12.20
- Representative from municipal waste company, 18.12.20
- Contact person for “The institutionalisation of climate action in the new Kristiansand municipality”, 18.12.21
- Sustainability adviser, 22.12.20
- Municipal leader for climate change and planning, 30.06.21
- Representative from the county municipality, 18.06.21

Trondheim

- Project leader “Reduced food waste and climate-friendly menus”, 21.12.20
- Leader production kitchen, 14.06.21
- Climate coordinator for the Trondheim municipality, 18.12.20
- Municipality Director, 16.12.20
- Representative from the county municipality, 15.06.21

The skilled farmer

- Project leader “The skilled farmer”, 18.02.21
- Leader municipal land use office, Hadeland municipality, 02.03.21
- Project stakeholder, 04.03.21
- Project contact person in the Østre Toten Municipality, 04.03.21

Smart travel

- Initial project leader for “Smart travel”, 02.06.21
- Business stakeholder, 06.07.21
- Municipal director for business, 16.06.21
- Representative from the county municipality, 17.06.21

Norwegian climate investment (“Klimasats”) Fund

- Employee, 23.04.21
- Employee, 30.04.21
- Employee, 29.04.21

Government agency or ministry¹

- Senior civil servant, 21.05.21
- Senior civil servant, 21.05.21
- Senior civil servant, 15.04.21