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Role of local governments in EU member states' climate policy and legislation



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This article provides a better understanding of the opportunities and challenges that local governments have in achieving climate objectives, both within EU member states' national climate policy and national climate law, and how this relates to the literature on multi-level governance. More specifically, the differences and similarities between the national climate plans and national climate legislation of four selected member states (Germany, Ireland, Netherlands and Spain) have been examined. The findings from this can be related to the literature on multi-level governance when it comes to opportunities and challenges regarding the role that local governments fulfill. On the one hand, local governments are often seen as potential key drivers that can successfully work together and whose involvement can lead to more effective climate governance. On the other hand, local governments are legally and financially dependent on higher levels of government in the implementation of their assigned climate-related tasks and responsibilities.

Although combating climate change is a global challenge, there are numerous sustainability initiatives worldwide at a local level¹. Not only countries, but also local governments have been assigned an important role in the Paris Climate Agreement. It namely stresses that the importance of the engagements of all levels of government is recognized, in accordance with respective national legislations of Parties, in addressing climate change². In the EU Green Deal, local authorities are mentioned as parties that work closely together with EU's institutions and consultative bodies when it comes to combating climate change³. To stimulate climate action in EU member states at a local level, there is a special initiative called 'Green Deal Going Local'. In this, local and regional authorities across the EU cooperate to assist in reducing greenhouse gas emissions⁴.

The European Climate Law, the legal elaboration of the goals set in the European Green Deal, also mentions the importance of climate action at a local level (art. 38 Regulation (EU) 2021/1119). According to this law, each member state shall establish a multilevel climate and energy dialog pursuant to national rules. In this dialog, different parties, including local authorities, are able to engage and discuss the achievement of the EU's climate-neutrality objective (art. 2(1)) including for the long term. In this context, the law also speaks of a 'review progress', which may imply that the member states has to provide information on progress (and the lack thereof) as part of the dialog (art. 11, amendment of Regulation (EU) 2018/1999).

EU member states' national climate policy also emphasizes the important role of local authorities. This follows from a preliminary study in which I investigated national climate plans of the EU member states. These climate plans concern the so-called National Energy and Climate Plans (NECPs) that all EU states have and, if available, other current national

climate plans accessible in English. For the purpose of this research, a 'national climate plan' is considered to be a document of the national government in which the national strategy for achieving climate objectives has been elaborated in response to what has been determined at the European level. In fact, in all cases, the plans were recognizable by a title such as '(National) Climate (Change) (Action) Plan / Strategy / Roadmap'. It was also characteristic that the following (climate) themes were reflected in all documents: energy, buildings and mobility.

As shown in the figure above (Fig. 1), local authorities have been assigned a role to assist in combating climate change within the national climate plans in 25 of the 27 EU member states. The (climate) 'role' of local governments should be understood broadly in this context. Not only explicitly stated tasks and responsibilities, but also more general recognition of the importance of the involvement of local authorities in climate policy counts as a role for a local government. In this context, 'task' refers to the description and specification of a particular task that local authorities have when it comes to achieving climate objectives. For example, one of the tasks that Dutch municipalities have is to determine the schedule of the step-by-step approach to phasing out natural gas⁵. A 'responsibility' is not particularly the description of a certain task that local governments have, but the statement that local governments are responsible for a certain theme or range of tasks within the achievement of climate objectives. For instance, the Spanish Federation of Municipalities and Provinces is one of the responsible parties within the climate theme 'city, urban planning and building'⁶.

Within 22 of the 27 EU member states, the tasks and responsibilities of local governments are specified in a national climate plan. Only in the

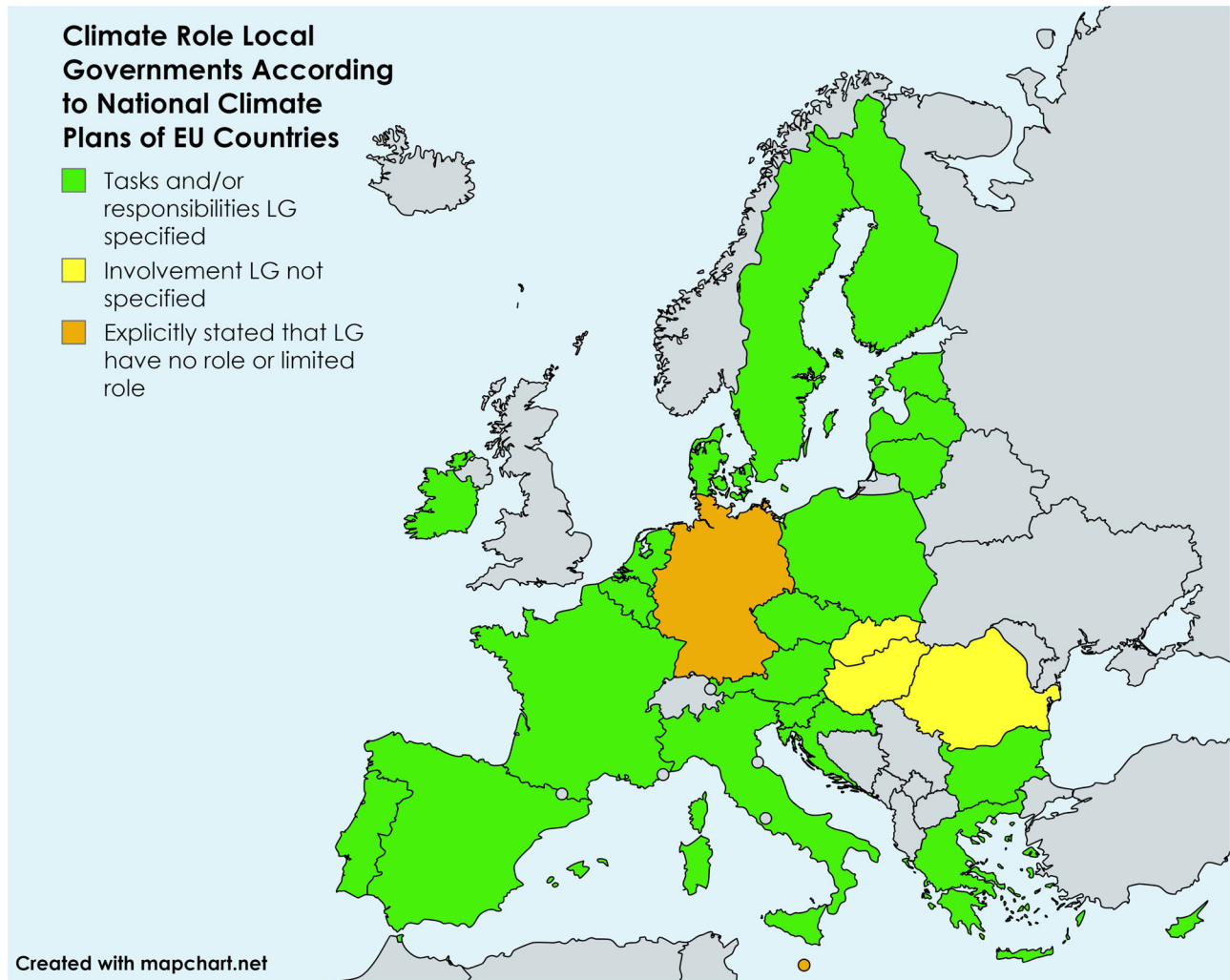


Fig. 1 | Climate role local governments according to national climate plans of EU countries.

national climate plans of Germany and Malta it is explicitly stated that local governments have no role or a limited role. Malta's climate plan explicitly mentions that the role of local governments is primarily administrative and their involvement in climate policy design is marginal⁷. This may be related to Malta's small size and the relatively small territories of local governments within it. It follows from the German climate plan that local authorities should have a limited role in climate policy. Germany's climate policy will be discussed in more detail later in this article. The countries Hungary, Romania and Slovakia do mention the involvement of local authorities in their climate plan, but do not specify this involvement.

The role of local authorities in reducing greenhouse gas emissions is thus recognized and emphasized at global, continental and national (political) level⁸. This paper focuses more specifically on the opportunities and challenges of local authorities in achieving the climate change mitigation targets set by the EU and the national governments. In this context, 'opportunities' refer to areas where local authorities may have chances to make a (valuable) contribution to achieving climate objectives. 'Challenges' are about the constraints that local governments face when it comes to combating climate change. Furthermore, within this article, 'local' means basically everything that is decentralized government, such as provinces, municipalities, cities et cetera⁹. It was decided to adhere to this broad definition because all different forms of decentralized government are often grouped together under 'local' in the investigated literature, climate plans and climate policy. If this article refers to a specific form of decentralized government (such as municipalities), this is explicitly stated. Besides that, the terms 'local government' and 'local authority' are used interchangeably

in this article, because these terms are also used interchangeably in the examined literature, policy and legislation.

Overall, this article adds an in-depth study to the existing literature on EU climate policy and legislation by providing a better understanding of the opportunities and challenges that local governments have in achieving climate objectives, both within EU member states' national climate policy and national climate law, and how this relates to the literature on multi-level governance. The central research question is therefore:

- What opportunities and challenges do local governments have in achieving climate objectives, both within EU member states' national climate policy and national climate law, and how does this relate to literature on multi-level governance?

This article is structured as follows. First the role of local governments within climate policy will be discussed on the basis of multi-level governance (MLG). MLG is, in short terms, the dispersion of authority to jurisdictions within and beyond the national state¹⁰. The terms 'theory', 'concept' and 'system' are used in the literature to describe MLG. For example, MLG is described as 'a system of continuous negotiation among nested governments at several territorial tiers – supranational, national, regional, and local – as the result of a broad process of institutional creation and decisional re-allocation'¹¹. MLG has also been used as a theory to try to provide a simplified notion of what is pluralistic policy-making activity at various governmental levels, from the supranational to the local¹². There are several contrasting visions about how MLG should be organized. However, this article does not go into this in more detail, but focuses more specifically on

the role that local governments (may) have within multi-level climate governance. Within the literature on MLG, the focus is often on decentralization, which is the shift of authority (fiscal, political, administrative) from the central government to regional or local governments within a country¹⁰. The link between decentralization and climate policy has also been discussed a lot in MLG literature¹³, including in studies in which a comparison is made between different countries¹⁴. In this article, MLG has been chosen as a theoretical basis because it helps to explain what opportunities and challenges there can be when it comes to delegating (climate) tasks and responsibilities to local governments. Hence, in the discussion of the literature, a subdivision will be made into opportunities on the one hand and challenges on the other.

From the findings of the MLG literature, a number of categories can be derived, on the basis of which national climate plans and national climate laws of a selected number of EU member states will be analyzed and compared. These categories, which will be explained and discussed in detail later in this article, are:

1. recognition of the role of local governments in combating climate change;
2. which tasks and responsibilities are assigned to local authorities;
3. cooperation, between local authorities and between local authorities and other parties;
4. the legal restrictions that local governments experience when implementing climate policy, and;
5. financial dependence, especially on the central government.

In order to delineate this article, it has been decided to focus on national climate laws with regard to the position of local authorities in climate legislation, and not, for example, on environmental law. A national climate law is considered to be a document of the national government in which the national strategy for achieving climate objectives has been laid down by law in response to what has been determined at the European level and what has been elaborated in the national climate policy. In fact, in all cases, the laws were recognizable by a title such as ‘(National) Climate (Change) Law / Act’. Within the comparative approach of this article, the selected countries are Germany, Ireland, Netherlands and Spain. Methodological justification for the chosen EU member states are the different visions within national climate policy on the allocation of climate tasks and responsibilities to local authorities, the presence of a general national climate plan (next to the NECP) and the presence of a (clear) legal basis in which climate policy is elaborated in different ways, also when it comes to the role of local authorities. Besides that, the state structure and the legal position of local authorities within differ between the four selected member states. It is because of the different views of the countries that various lessons can be learned from climate policy and climate law.

This article ends with a discussion in which the link will be made between the discussed literature on MLG, and the findings from the climate policy and climate legislation of the selected EU member states. In this way, MLG is not only used to help explain opportunities and challenges, but also to investigate in a categorized way to what extent the practice is in line with the literature (and vice versa).

Results

The role of local governments in combating climate change will be discussed below on the basis of (the literature on) multi-level governance. A distinction is made between opportunities and challenges. For an explanation of MLG and the definition of ‘opportunities’ and ‘challenges’ used for this article, I refer to the introduction. The opportunities and challenges discussed below are not necessarily exhaustive, but they do provide a balanced and nuanced picture of how the role of local authorities within climate policy is interpreted in the MLG literature.

MLG literature: opportunities

Much has been written about the importance of the role of local governments compared to national governments¹⁵. From this it follows that the

spread of governance across multiple jurisdictions is more effective than the central state monopoly¹⁶. Climate governance at different levels of government could lead to more effective, equitable and sustainable outcomes at multiple scales¹⁷. In this context, ‘effective’ means that distribution of climate-related tasks (and responsibilities) takes place in which local governments carry out tasks that can be performed better by them than by other levels of government, which may lead to the faster achievement of climate objectives¹⁶. Some (climate) tasks are generally better performed by local governments than by other levels of government. For example, in the case of sustainability, local authorities play a central role in educating, promoting and creating awareness¹⁸. The reason that local governments are suitable for this is that they are the administrative level (of government) closest to the citizens, and therefore may know better how to reach and how to mobilize local communities to take climate action¹⁹. With regard to the European Union, it is discussed that the EU leadership in climate change is not primarily due to the rules set by the EU itself, but rather to ‘a dynamic process of competitive multi-level reinforcement among the different EU political poles within a context of decentralized governance’²⁰. Some authors see MLG’s effectiveness as a stark contrast to the slow progress of international climate negotiations^{21,22}. Furthermore, climate action at the local level seems to be extra effective in countries with a lack or limitation of support of the national government^{14,23,24}. Even though local governments can play an important role in combating global warming, each level of government within climate governance has its own potential²². Some authors therefore emphasize the (potentially) important role of national governments, with the mention that not everything can be realized at local level²⁵.

It is important that political actors must join forces to achieve policy outcomes, particularly when it comes to comprehensive and challenging domains such as climate change mitigation²⁶. Involving local authorities in climate policy creates more opportunities for cooperation and could therefore stimulate the achievement of climate objectives²⁷. The various collaborations in which local authorities can be involved are reflected in diverse forms of multi-level climate governance^{24,28}. There are also studies that focus on collaboration within the municipality itself, which also involves non-public actors, such as citizens and companies²⁹. It follows, *inter alia*, that local authorities steer where the citizens and private sector are expected to take responsibilities³⁰. Furthermore, research on multi-level climate governance has even been done at a ‘micro-local’ (small towns, parishes) level³¹. Although there are many examples of successful (local) climate collaborations, it is important to keep in mind that cooperation does not automatically lead to a more effective climate policy³². In order to achieve effective cooperation, a clear coordination of tasks between parties is therefore essential.

Local governments are often seen as key drivers in mitigating climate change³⁴. This is partly due to the large number of local climate plans that contains ambitious climate targets³³. As an example, the role of local authorities is described as a key medium through which to coordinate and influence workable local level responses to the problem of developing more effective policies around energy and environmental issues^{19,34–39}. The important role attributed to local governments in mitigating climate change can also be related to the aforementioned point of view that climate policy is more effective when implemented at multiple levels of government. Although local governments are often seen as a major player in tackling the climate crisis, this image should not be romanticized. According to some authors, most local governments would not be nearly as ambitious on climate change as they are thought to be⁴⁰. That is why it seems appropriate to describe local authorities as ‘potential’ key drivers. The position of local authorities seems promising, but the effect in practice is not always⁴¹. This also has to do with the restrictions that local governments face, which are discussed hereafter.

MLG literature: challenges

Characteristic for local governments is that they generally have to deal with legal restrictions. Their legal powers do not, in principle, extend beyond their own territory. It follows from national legislation that local authorities

cannot (independently) design or amend laws: this is in Europe generally the task of the central government²⁵. An explicit example is that the national legislator in the Netherlands determines which taxes can be levied by provinces and municipalities (art. 132-6 Dutch Constitution). Because the national legislator organizes the laws of local governments, local governments in EU member states are legally dependent on the national government, also when it comes to implementing climate policy¹⁹. Local governments are not authorized to write their own climate laws, and therefore cannot legally define (new) tasks and responsibilities in the field of climate mitigation or climate adaptation. This could be a major constraint for local authorities, especially when the ambitions are higher than the targets set at national or supranational level, and the goals of local authorities cannot be achieved with current resources. Although local authorities can influence how they exercise their 'climate role', they must do so within the legal frameworks established by higher levels of governance⁴².

A point of criticism is that many local governments in the world currently have only few responsibilities regarding key sectors in climate change⁴¹. As a result, these local authorities can only make a modest contribution to mitigating climate change. The fact that many local governments have only few responsibilities is partly due to the legal restrictions discussed above. Some (climate) tasks cannot be carried out by local authorities, because they are not legally competent to do so. For example, local governments in EU member states cannot levy an energy tax because this is generally a national tax and not a local tax (the United States and Canada are one of the few countries with a decentralized energy tax)⁴³. Furthermore, it is sometimes only logical that certain responsibilities are not attributed to local governments. For instance, small municipalities cannot be expected to take care of large climate tasks²⁴. Moreover, it is acknowledged that more and more tasks and responsibilities in the field of combating climate change have been shifted from the national government level to the local²⁵. In the context of effective multi-level governance, this could be seen as desirable²².

Local governments are often financially dependent on national governments and international institutions⁴⁴. In many countries, the main sources of income for local governments are funding from the national government. Only a small part of the income of local governments consists of own resources, such as taxes⁴⁵. The fact that local governments are

financially dependent on national and international institutions also has an impact on climate policy. A lack of own financial resources can hinder the achievement of set climate goals⁴¹. In many countries, local authorities remain legally and financially ill-equipped for identifying and treating climate change risks and addressing emerging local vulnerabilities⁴⁶. Funding from external parties does not always have to be enough. In order for local authorities to play a meaningful role in combating climate change, it is necessary to strengthen the financial base²².

Although the results of local climate policy should not be romanticized, it follows from literature that an MLG approach is (potentially) more effective than a single government approach. The potential key drivers' role of local authorities in achieving climate objectives is recognized, and climate measures are being implemented at local level. Furthermore, the involvement of local governments creates more opportunities for cooperation. However, in implementing their climate policy, local governments depend on the central government. This is not only with regard to the distribution of (legal) powers and responsibilities, but also when it comes to obtaining finances.

Climate policy and legislation in selected EU member states

To delve deeper into the question of what opportunities and challenges local governments have in achieving climate objectives, national climate plans and climate laws of Germany, Ireland, Netherlands and Spain will be analyzed and compared hereafter. Methodological justification for the selected countries is included in the introduction of this article. For a better understanding of the choices countries make in assigning tasks and responsibilities to local governments, the state structure and the legal position of local authorities within the selected EU member states are briefly described in the table below (Table 1). The names of the examined national climate plans and climate laws are also listed.

For the forms of climate policy to be discussed below, it was decided to examine more general national climate plans. In the case of NECPs, the emphasis is often mainly on energy measures, while in the case of general climate plans, the focus on different themes (such as mobility, buildings, agriculture) is more evenly distributed. This provides more balance in how climate tasks and responsibilities are distributed, also with regard to local authorities. Furthermore, it has been decided not to go deeper into climate

Table 1 | State structure and legal position of local authorities within selected EU member states

Germany	Ireland
<ul style="list-style-type: none"> Federal state (art. 20 German Basic Law (<i>Grundgesetz für die Bundesrepublik Deutschland</i>)); Sixteen Länder (federal states), four hundred <i>Kreise</i> (counties at intermediary level, subdivided into 106 '<i>kreisfreie Städte</i>' and 294 '<i>Landkreise</i>') and 10.789 municipalities (<i>Gemeinden</i>, local level); Local authorities have the so-called right to local self-government (<i>kommunales Selbstverwaltungsrecht</i>). This means that they have the right to manage their own affairs under their own responsibility within the limits set by the law (art. 28(2) German Basic Law); The federal state (<i>Bund</i>, national level) and the Länder do have legislation powers (art. 70(1) German Basic Law), local authorities do not have these; Climate plan: German Climate Action Plan 2050 – Principles and goals of the German government's climate policy⁴⁶; Climate law: German Federal Climate Change Act (<i>Bundes-Klimaschutzgesetz</i>). 	<ul style="list-style-type: none"> Parliamentary democracy and a unitary state; Three regional assemblies and 31 local authorities (local level; subdivided into 26 counties, three city councils and two city and county councils); The national government has full legislative powers; Local authorities do have some competences laid down in the law, which are under supervision of the national government; Climate plan: Irish Climate Action Plan 2021 – Securing Our Future⁴⁷; Climate law: Climate Action and Low Carbon Development (Amendment) Act 2021.
Netherlands	Spain
<ul style="list-style-type: none"> Decentralized unitary state; Twelve provinces (also seen as regional level, but in this article marked as local level) and 342 municipalities (local level). Alongside these levels of government, there are 21 so-called water boards (<i>waterschappen</i>, local level) responsible for managing water; Dutch local authorities do have autonomy set by law (art. 124 Dutch Constitution (<i>Grondwet</i>) in conjunction with Provinces Act, Municipalities Act and Water Boards Act), but the national government has a coordinating role in decentralization (art. 114 Dutch Provinces Act and art. 116 Municipalities Act); Climate plan: Dutch Climate Agreement⁴⁸; Climate law: Dutch Climate Act. 	<ul style="list-style-type: none"> Decentralized unitary state; Seventeen Autonomous Communities (<i>Comunidades Autonomas</i>, regional level), fifty provinces (local level) and 8.131 municipalities (local level). Besides that, there are two autonomous cities (local level); The local authorities in Spain do have autonomy, which follows from the right to self-government (art. 137 Spanish Constitution (<i>Constitución Española</i>)). However, this autonomy provinces and municipalities have is only administrative and not legislative; As same as the Länder in Germany, the Spanish Autonomous Communities do have their own legal powers; Climate plan: Spanish National Climate Change Adaptation Plan 2021-2030⁴⁹; Climate law: Climate Change and Energy Transition Law (<i>Ley 7/2021, de 20 de mayo, de cambio climático y transición energética</i>).

plans of local governments themselves. This is not only because of the limitation of the size of this article, but also because a follow-up study (following this article) will be done where the focus will be on local climate plans. That is why it has for now been decided to investigate the ‘national vision’ on how climate policy and climate legislation and the role of local authorities in this is established. With regard to climate legislation, the focus is mainly on the general national climate laws. This focus is chosen because each of the countries investigated has such a law, which creates a balanced comparison.

The structure of the rest of this section is the following. An analysis is made on the basis of categories that are reflected in the MLG literature on the one hand and the climate policy and legislation examined on the other. This category-based classification makes it immediately clear for each category what (remarkable) differences and similarities are in climate policy and legislation between the countries studied. The categories are, as mentioned in the introduction: (1) recognition of the role of local governments in combating climate change, (2) which tasks and responsibilities are assigned to local authorities, (3) cooperation, between local authorities and between local authorities and other parties, (4) the legal restrictions that local governments experience when implementing climate policy, and (5) financial dependence, especially on the central government.

Due to the extensive amount of information that follows from the climate policy and legislation examined, it has been decided to include additional examples per category and per member state in the supplementary tables of this article where applicable (see Supplementary Tables 1–5).

Recognition climate role

In the climate plans of all four EU member states analyzed, the involvement of local governments is mentioned. This is often done in combination with the mention that it is important to combat climate change in collaboration with various parties, citing local governments as one of those parties. For example, Irish local authorities are involved at the so-called National Dialog on Climate Action (NDCA), along with private and other public parties. A report by the NDCA shows that there’s a need to enhance the capacity of local authorities, in order to achieve Ireland’s climate ambitions⁴⁷.

It also follows from the climate laws in Germany, Ireland, Netherlands and Spain that local authorities are involved parties. In the Dutch Climate Act, for instance, it is stated that the national government consults with administrative bodies of provinces, water boards and municipalities for the implementation of the Climate Act and the achievement of the objectives formulated therein (art. 8 (1)). In this consultation, at least the implementation of the Dutch climate plan and proposals for (possible) new climate measures are discussed (art. 8(2)). By doing this, the national government concludes agreements with local authorities aimed at achieving the climate objectives (follows from art. 8(3)).

In the four member states investigated, local authorities are thus recognized at both policy and legal level as parties involved in combating climate change. In that sense, this could respond to the legal requirement that local authorities must be involved in the multilevel climate and energy dialog as mentioned in the European Climate Law (art. 11). The extent to which local governments actually participate in this dialog and can fulfill an important role, as stated in the discussed literature, cannot be directly deduced from the only fact that the climate role for local governments is recognized. More concrete indications of this may be found in the delegated tasks and responsibilities discussed below.

Tasks and responsibilities

It follows from the preliminary study discussed in the introduction that within 22 of the 27 EU member states, the tasks and responsibilities of local governments are specified in a national climate plan. As one of the few EU states, Germany is reticent when it comes to delegating climate-related tasks and responsibilities to local governments. The German climate plan literally says that climate policy is not an integral part of local public services, and that it is not self-evident that local governments themselves take action on

climate. This may have to do with the federal structure in Germany. In this, it is more self-evident that the execution of tasks and powers at decentralized level is rather done by the Länder than by the local authorities (municipalities)⁴⁸.

Unlike in Germany, Irish local governments are given an important role in various climate issues, which is regularly emphasized in the discussed climate plan. This is quite striking, since Ireland is a centralized state. Although Irish local authorities for example have no powers to make or amend laws, it seems that the national government takes into account the powers of local governments. This follows, among other things, from one of the action points for the national government that legislation will be reviewed to ensure that local authorities have the necessary powers to introduce low and zero emission traffic zones (p. 48)⁴⁷.

Similar to Ireland and Spain, the Dutch climate plan describes the tasks and responsibilities of local authorities in detail, spread over various climate themes such as making homes more sustainable. This does not only apply to municipalities, but also to other Dutch local authorities (provinces and water boards). In the case of CO₂ reduction measures by companies, for instance, provinces have been designated as the competent authority for granting permits (p. 99)⁵.

Spanish local authorities are assigned a remarkable high number of responsibilities within the remarkably high number of eighteen different climate themes. Surprisingly, (partnerships) of local authorities are not literally regarded as responsible parties within the major theme of ‘energy’. In this context, however, reference is made to the Spanish NECP, which states that local authorities actually do have responsibilities when it comes to energy as a climate theme. More than in the other national climate plans that have been compared to, an important task is assigned to cities when it comes to making buildings more sustainable. This is partly due to the development in Spain that more and more inhabitants are moving from small municipalities to the big cities⁶.

The German climate law does not contain explicit tasks or responsibilities for local governments. This is in line with what follows from the German climate plan, namely that although local authorities have the choice to take climate action, they are not obliged to do so. Moreover, one could deduce from the German Climate Change Act that municipalities have a responsibility when it comes to climate action. After all, the law speaks about ‘within their respective areas of responsibility’ (art. 13(1)). This is remarkable, because German municipalities have no responsibilities themselves within combating climate change. Although they can take action, the responsibility lies with the higher levels of government. This (legal) power of the federal government and Länder is emphasized later in the Climate Change Act: Länder may enact their own legislation on climate change, without prejudice to compatibility with federal law (art. 14(1)). Local authorities are not mentioned here, which implies that German municipalities cannot adopt their own climate legislation, which is in line with the absence of legal powers they have in Germany. It is also striking that article 13 speaks of ‘municipal associations’ in addition to municipalities, while these are not mentioned anywhere else in the law or in the climate plan.

With regard to the Netherlands, the contrast between the Dutch Climate Agreement and the Dutch Climate Act is remarkable. While the agreement elaborates on the many different tasks and responsibilities for local governments, the compact Act says nothing about this. The Dutch climate law only gives local authorities the opportunity to participate in the preparation of the climate plan (art. 8).

In the Spanish climate law, the detailed elaboration of the tasks and responsibilities of local authorities when it comes to sustainable mobility is striking. The fact that tasks and responsibilities for local authorities are detailed in the law could be related to Spain’s decentralized structure. Local authorities, in collaboration with the national government and the Autonomous Communities, will adopt measures to achieve in the year 2050 a fleet of passenger cars and light commercial vehicles without direct CO₂ emissions. It is emphasized that this is carried out within the framework of the powers of the authorities (art. 14(1)). Spanish municipalities with more than 50,000 inhabitants and island territories will adopt sustainable urban

mobility plans that introduce mitigation measures that make it possible to reduce emissions derived from mobility. What should at least be in the plans is described in detail in the law. It includes, among other things, measures to facilitate travel on foot, by bicycle or other means of active transport, measures for the improvement, electrification and use of the public transport network, measures to promote shared electric mobility and charging points, and measures to integrate municipal low emissions zones (art. 14(3) (a-i)). Such a detailed elaboration within a specific climate theme is not reflected in the climate laws of Germany, Ireland and the Netherlands. The emphasis on implementation at local level in the context of sustainable mobility is remarkable compared to the Spanish climate plan. In this climate plan the emphasis is, especially when it comes to implementation at urban level, on making buildings more sustainable. However, the latter is not specified in the climate law. It is conceivable that a specified description of tasks and responsibilities in the law can contribute to more effective governance, because local governments may then know better what is expected of them in achieving climate objectives.

Cooperation

The climate plan of Germany does not emphasize cooperation between local authorities and other parties, unlike the other climate plans examined. This could be due to the fact that German local authorities do not have their own tasks and responsibilities in the field of climate policy, and that cooperation with other parties is therefore not seen as necessary. There is communication between local government and national government in Germany, but this is more within a 'funding relationship', which is discussed in more detail under the subsection 'financial dependence' later in this article.

In Ireland, the large number of climate collaborations and initiatives at local level is remarkable. An appealing example is the Local Authority Climate Action Training, which has been developed to strengthen and empower local authority climate action leadership and build awareness and capacity within the sector to further reinforce the delivery of effective climate action. This climate training program provides online training courses that members of local authorities can follow⁴⁹. Such initiatives to strengthen knowledge and skills in combating climate change at a local level could be inspiring for other countries.

The Dutch climate plan is proactive when it comes to partnerships at a decentralized level. A striking example are the Regional Energy Strategies (RES), an initiative established as a result of the Dutch climate agreement. The RES are thirty different regions⁵⁰ where local authorities work together with social partners, network operators, companies and citizens to put national agreements from the climate agreement into practice at regional level. To a large extent, these are measures relating to the generation of renewable energy. The RES leads, inter alia, to decision-making by local governments on how to achieve renewable electricity generation targets for 2030 at decentralized level. Moreover, the RES also touches on other climate themes discussed, in particular in the field of the built environment. Besides that, umbrella organizations of municipalities (Association of Netherlands Municipalities, VNG) and provinces (Interprovincial Consultation, IPO) are assigned climate tasks and responsibilities. It also follows from the climate plan that Dutch local governments not only cooperate with other government bodies, but also with private parties⁵. This is in line with literature from which it follows that it is characteristic that multi-level climate governance is not limited to governments, but that there is also room for involvement of other parties, such as actors from the private sector⁵¹.

In the context of making Spanish cities more sustainable, inter-departmental and intersectoral cooperation is emphasized in the climate plan of Spain, including cooperation with municipal authorities. More generally, Spanish climate policy results in several partnerships, between local authorities as well as between local authorities and the national government. Examples are the Spanish Federation of Municipalities and Provinces (FEMP), the Spanish Network of Cities for Climate and the Spanish Local Sustainability Network⁶. The presence of such collaborations could at least reflect the will and the potential to achieve climate objectives at local

level. The same applies to what follows from the climate plans of Ireland and the Netherlands.

Compared to climate policy, the climate legislation of the member states examined says little about cooperation between and with local authorities. Only within the Spanish climate law, where cooperation between public administrations is one of the guiding principles (art. 2(ñ)), cooperation with local authorities is mentioned at multiple places. For example, according to the law, Spanish local governments must work together to make mobility more sustainable (art. 14(1)). However, the elaboration of such partnerships is also less detailed than in the Spanish climate plan. The Irish climate act mentions cooperation in the context of making local authority climate action plans (section 16(4)), which will be discussed hereafter. The German and Dutch climate laws list local authorities as involved parties, but does not elaborate on how they can or should work together (with others).

Legal restrictions

How much freedom local governments have in implementing their climate policy depends to a large extent on the state structure of their country, and the legal position local governments have within this structure (see earlier in this section). In the decentralized countries Netherlands and Spain local authorities do have autonomy, in contrast to the centralized countries Germany and Ireland. However, in all four countries, the adoption and amendment of (climate) legislation is generally reserved for the central government, and in Germany and Spain also for the Länder and the Autonomous Communities respectively.

In Germany, local governments are not directly bound to the national climate plan. If German local authorities (municipalities) want to implement climate measures, this must be done within the legal framework set at federal and Länder level. In view of this, it is logical that, according to the *Klimaschutzgesetz*, municipalities must go through a public consultation procedure in every climate program under the supervision of the national government (see art. 9(3)). After all, German local authorities cannot take any climate action by themselves without intervention from higher governmental levels.

Irish local authorities are legally bound to make a climate action plan. This is different from, for example, the elaboration of the Dutch climate law. The Irish law provides, in a separate section, clear tools about the formal procedure for creating and publishing a climate action plan (section 16). In fact, in all formal acts, such as approving and publishing the climate plan, local authorities themselves have the responsibility. All steps in the climate plan process are in principle without intervention from the national government. Such a thing would be unthinkable in Germany, for example. It is striking that local authorities, on the other hand, are obliged to consult with other local authorities in the context of drawing up a climate action plan (section 16(4)). The Irish climate act says nothing about the content of the climate action plan; this is apparently left to the local authorities themselves. No explicit tasks within specific climate themes are assigned to local authorities, such as in the climate law of Spain. The Irish climate act creates a degree of policy freedom for Irish local authorities. However, it follows from the law that in certain cases the Minister (for the Environment, Climate and Communications) may issue guidelines, consistent with furthering the achievement of the national climate objective. If the Minister does so, then the local authorities shall comply with any such guidelines (section 16(8)). This provision is in line with the centralized state structure Ireland has, where local governments as executors of the law are under supervision of the national government. However, the tone of the Irish climate act may be interpreted as that local authorities basically have control in making a local authority climate action plan.

Since the climate act of the Netherlands does not specify any tasks or responsibilities, Dutch local governments are not directly bound to this law. The Act therefore has no direct consequences for local governments; it mainly contains obligations for the national government. Within certain climate themes, Dutch local authorities do have the freedom to pursue their own policies. The municipality of Rotterdam, for example, has its own

regulation with regard to (the drainage of) rainwater⁵². However, as in the other member states surveyed, Dutch local authorities cannot design their own ‘climate laws’. Unlike the local authorities in Netherlands and Germany, Spanish local governments are directly bound to their national climate law. This is because the climate law of Spain specifies local governments’ tasks and responsibilities, as discussed above.

Financial dependence

In the German climate plan, the emphasis is on getting funding from the federal government when it comes to the contribution that local governments can make to combating climate change⁴⁸. From literature it follows that most German funding programs also require own financial contributions from local governments, which many local governments however cannot provide, due to budget constraints or lack of political backing⁵³. An important source of funding for local governments in Germany is the National Climate Initiative (NKI). This initiative, which is supported by the federal government, has as a ‘key task’ to reinforce climate action by local authorities. Within the NKI, the Local Authorities Guideline (*Kommunalrichtlinie*) offers financial support for a wide range of climate action measures since 2008 and has funded thousands of different projects for thousands of different local governments. In addition, the Federal Environment Ministry has launched a support program with the guideline ‘Masterplan Local Authorities’, with the specific aim of supporting each municipality in reducing greenhouse gas emissions with 95 percent by 2050 compared with 1990 levels and reducing final energy consumption with fifty percent compared with 1990 by 2050. However, the German climate plan seems contradictory on certain points: restraint is required when it comes to climate policy at the local level, while on the other hand, one of NKI’s key tasks is to strengthen local climate policy. Or does this mean that local authorities should have better access to funding, for example for even more projects? Or that they should get more funding in general? In this context, it is also remarkable that the ultimate target of funding local authorities is a CO₂ reduction of 95 percent in 2050 compared to 1990, while the national CO₂ reduction target is less strictly formulated: 80 to 95 percent (pp. 31 resp. 6). This implies that even more is expected of local governments, but this is paradoxical, since local governments do not in fact have their own climate policy powers.

The climate plan of Ireland also shows certain financial dependence on the national government. The climate plan explicitly states that various climate initiatives at local level are financed by national government funding (pp. 84, 132, 139)⁴⁷. From the Irish climate law, on the contrary, it does not follow how local governments are funded or how they have to generate their own revenue to undertake climate initiatives. This is also not mentioned in the other national climate laws examined. In the Dutch and Spanish climate plan, less emphasis is placed than in the German and Irish climate plan on funding from central government to local governments when it comes to climate action at a local level. However, this does not mean that the local governments of the Netherlands and Spain can implement all climate measures without funding from the national government. This follows, among other things, from the fact that within themes for which local authorities are responsible, forms of funding from the national government are present^{5,6}.

The table below (Table 2) shows schematically some important findings, based on the categories discussed. This clearly shows differences and similarities between the different national climate policies and laws.

Discussion

It is in line with the MLG literature that the role of local governments in both climate policy and climate legislation is recognized. Local governments do have a potential important role in several aspects when it comes to taking climate action. At a minimum, this requires that local authorities are named as parties involved in climate policy and legislation. It also connects with the general concept of multi-level climate governance that taking climate action takes place at multiple levels of government, including the local level. Whether local governments actually play a key role in combating climate

change does not follow from the fact that they are only mentioned in climate policy and legislation. The important role will have to be demonstrated by the tasks and responsibilities assigned to them, which will be discussed in more detail below. However, the fact that local authorities are mentioned as involved parties in both climate policy and legislation can be seen as a starting point from which (important) tasks and responsibilities for local governments could be worked out.

There are conflicting views in the literature on MLG when it comes to the implementation of tasks and responsibilities by local governments in the field of climate policy. On the one hand, local governments are often seen as (potential) key drivers in mitigating climate change, which can generally perform certain tasks better than the national government. On the other hand, it is stated that many local governments have few responsibilities that matter, so they play a modest role in tackling the climate problem. First of all, it is striking that the climate plans of Ireland, the Netherlands and Spain assign many tasks and responsibilities to local authorities. This also applies to major climate themes such as energy and mobility. That local governments would have few responsibilities within important climate issues, as suggested by some authors, does not apply in all cases. As the only country of the member states examined, Spain has detailed the tasks and responsibilities in both climate policy and climate legislation. This ties in with the fact that Spain is sometimes used in the MLG literature as an example of a country in which local climate policy is successful due to a lack of climate policy at the national level¹⁴. However, in this context, the ‘lack’ of climate policy at the national level could be seen as logical: if local authorities are responsible for certain tasks, then these tasks no longer need to be carried out by the national government.

Of the member states surveyed, Germany is most in line with the point of view that local governments have few (or in Germany: actually no) responsibilities in the field of combating climate change. In the German situation, this is partly due to the federal structure of the country, whereby the granting of powers to local governments seems less self-evident than in decentralized countries such as the Netherlands and Spain. However, a country does not need to be decentralized to give local governments (many) climate tasks and responsibilities, as showed by Ireland. The large number of tasks and responsibilities assigned to local authorities, especially in the national climate plans examined, can imply that they are actually important players in combating climate change, as suggested in the literature discussed. Assigning many tasks and responsibilities gives local authorities at least more opportunities to make a possibly valuable contribution to achieving climate objectives.

It follows from the MLG literature that within comprehensive and challenging domains such as climate change mitigation, cooperation between parties is necessary to achieve results. In line with this, cooperation – also with local authorities as stakeholders – is an important theme in the climate plans of Ireland, the Netherlands and Spain. The climate policies of these countries indicates different forms of cooperation: local governments among each other, together with the national government and/or together with non-public stakeholders. This is in line with the many studies that have been done on the different forms of multi-level climate governance, and it may also respond to the legal requirement that local authorities must be involved in the multilevel climate and energy dialog as mentioned in the European Climate Law (art 11). Whether cooperation really stimulates the achievement of climate objectives depend on the effectiveness of the cooperation, which must be demonstrated by practice⁵⁴. However, there are many examples that show that cooperation between parties (among them: local authorities) can lead to effective climate policy⁵⁵. An interesting example from the climate policy studied is the Local Authority Climate Action Training from Ireland, where local authorities can learn from each other and develop themselves. This also fits in well with the aforementioned typical climate tasks for local authorities, namely educating, promoting and creating awareness with regard to climate action.

With regard to legal restrictions, the examined national climate legislation confirms the views from the MLG literature. In order to execute their climate-related tasks and responsibilities, local authorities must operate

Table 2 | Similarities and differences national climate policy and legislation

	Germany	Ireland	Netherlands	Spain
Involvement LG mentioned in policy	Yes	Yes	Yes	Yes
Involvement LG mentioned in law	Yes	Yes	Yes	Yes
Own tasks and/or responsibilities LG in policy	No	Yes	Yes	Yes
Tasks and/or responsibilities of LG specified in law	No	No	No	Yes
Cooperation LG with other parties mentioned in policy	No	Yes	Yes	Yes
Cooperation LG with other parties mentioned in law	No	Yes	No	Yes
LG directly bound to national climate law	No	Yes	No	Yes
Emphasis on funding from NG in policy	Yes	Yes	No	No
Emphasis on funding from NG in law	No	No	No	No

LG local governments, NG National government / federal government.

Table 3 | Opportunities and challenges local governments in national climate policy and legislation

Opportunities	Challenges
<ul style="list-style-type: none"> • LG are mentioned as involved parties in both climate policy and climate legislation. This can be seen as a starting point from which tasks and responsibilities for local authorities could be worked out; • Within various (major) climate themes, LG have been assigned tasks and responsibilities. This creates more opportunities to make a possibly valuable contribution to achieving climate objectives; • Involving LG in climate policy creates more opportunities for cooperation and could therefore stimulate the achievement of climate objectives, if the cooperation is carried out effectively; • National legislation can prescribe rules and guidelines for LG on how to arrange their climate policy. 	<ul style="list-style-type: none"> • LG have limited legal powers; they must operate within the legal boundaries set by higher levels of government. In order to achieve the potential of multi-level climate governance, it is essential that the central government provides sufficient powers to LG; • LG are financially dependent on higher levels of government. In order to achieve the potential of multi-level climate governance, it is essential that the central government provides sufficient financial resources to LG; • Despite their often high ambitions and the important role in taking climate action recognized in both literature and national policy, LG are dependent on higher levels of government when it comes to being assigned tasks and responsibilities; • There is often no (clear) legal basis for the specific tasks and responsibilities of LG in taking climate action.

LG local governments.

within the legal boundaries set by higher levels of government. However, national legislation may also be helpful for local governments when it comes to implementing climate policy. An example follows from the Irish climate law, which provides rules when it comes to designing local climate action plans. In this prescribed formal procedure, local authorities seem to have a lot of freedom and responsibility.

The findings from the aforementioned policy and legislation are in line with the MLG literature from which it follows that local governments are financially dependent on the central government, also when it comes to financing climate measures. This follows emphatically from the climate plans of Germany and Ireland. Local governments generally do not have sufficient own financial resources to fund climate initiatives, and are therefore largely dependent on external funding. This can be connected to the aforementioned fact that local governments have limited legal powers and that they are legally dependent on higher levels of government.

The value of this article for future research lies in its insights into the role of local governments in achieving climate objectives within the framework of national climate policy and legislation in the EU. By comparing national climate plans and laws in four member states, it allows researchers to analyze patterns and differences. These findings deepen the understanding of multi-level governance, particularly regarding the opportunities and challenges for local governments. Future research can build and expand on these insights through, for example, comparisons with other member states, an in-depth analysis of the financial dependency that local governments face, or by shifting the focus from national to local climate policies and laws.

Altogether, the following main opportunities and challenges can be derived (see Table 3 below):

Methods

For the preliminary study mentioned in the introduction, I analyzed the national climate plans manually, without (advanced) computer programs.

Within the plans, I searched for keywords (via 'CTRL + F') that have to do with local government, such as 'local', 'local authorities', 'municipalities', etc. Subsequently, I investigated the extent to which climate tasks or responsibilities are (not) explicitly assigned to local authorities. I kept track of all the findings in an Excel document. I call this a 'preliminary study' because I already did this before I started writing the article. The rest of the article is based on a review of (multi-level governance) literature and relevant policy and legal documents, with an emphasis on the national climate laws and climate plans of the member states Germany, Ireland, Netherlands and Spain. For additional information about this, I refer to the section 'data availability'.

Data availability

The climate plans used in the preliminary study can be found via www.climate-laws.org, where an overview of documents concerning climate policy and climate legislation is available per country. EU member states where these plans were available: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Netherlands, Poland, Portugal, Spain and Sweden. All NECPs can be found on www.ec.europa.eu. The online sources of the climate laws used in the in-depth study are the following: • English version German climate law: https://www.gesetze-im-internet.de/englisch_ksg; • English version Irish climate law: <https://www.irishstatutebook.ie/eli/2021/act/32/enacted/en/print.html>; • Dutch climate law (only in Dutch): <https://wetten.overheid.nl/BWBR0042394/2020-01-01>; • Spanish climate law (only in Spanish): https://www.boe.es/diario_boe/txt.php?id=BOE-A-2021-8447. A detailed overview of additional examples from the examined climate policy and legislation (including page numbers and articles of law) can be found in the Supplementary Tables.

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Author contributions

Robert Kastelein conceived the study and wrote the manuscript.

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