

Experiments in EU Climate Governance: The Unfulfilled Potential of the Covenant of Mayors

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Abstract

Over the last decade, a growing body of academic literature has reflected on how and under which conditions experiments in global climate governance lead to broader changes in rules, norms, and practices helping to meet the challenge of climate change. Drawing on the assumptions of the scholarship on experimentalist governance architectures, this article analyzes the effectiveness of the Covenant of Mayors (CoM) as a comprehensive governance framework that enables the development and coordination of local policies for sustainable energy and climate through a range of joint instruments for recursive goal setting, monitoring, and benchmarking. Our findings illustrate the CoM's significant potential in terms of both general political uptake and policy output, which could make of this program, if appropriately fine-tuned, a successful governance experiment contributing to building a more effective global climate regime.

As the efforts of multilateral intergovernmental institutions to build effective environmental and climate governance regimes have fallen short of success, new experimental forms of multilevel governance have gained increased attention in both academic and political debates (Bernstein et al. 2009; Bernstein and Hoffmann 2018). A burgeoning body of research has provided evidence of how cities and their networks may be relevant for attaining climate objectives by delivering policy experiments, building capacity, and establishing new forms of transnational climate governance (Andonova et al. 2009; Kivimaa et al. 2017; Turnheim et al. 2018). At the same time, the United Nations Convention on Climate Change (UNFCCC) process has recently shown the propensity to deploy orchestration (Abbott and Bernstein 2015) as a viable mode of governance, which

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could help solve drawbacks of more conventional forms of the transnational climate regime by steering substate actors toward public goals, while at the same time supporting weaker organizations, building capacity, and promoting coordination (Chan et al. 2015).

Whereas the UN capacity for screening, monitoring, and supporting transnational partnership has so far been limited (Chan et al. 2015), a variety of experimental forms of substate climate governance have emerged in the context of the European Union (EU), with the purpose of enhancing coordinated rule making, monitoring, and learning. The EU Covenant of Mayors (CoM) program deserves particular attention in this perspective, as it provides for a comprehensive system of *meta-networking* among cities at the EU level by bridging the gap between leaders, followers, and laggards (Kern 2019) and increasing local authorities' awareness and capacities in the field of climate policy (Domorenok 2019).

The CoM was launched by the European Commission in 2008 with the objective of engaging and supporting mayors to commit to the EU's climate and energy targets (European Commission 2008). Local authorities willing to join the program have to elaborate Sustainable Energy and Climate Action Plans (SECAPs), adopting common policy goals and using the EU methodological guidelines for designing, monitoring, and benchmarking their climate strategies.

Although it has not been conceptualized as such, the CoM shows a number of features typical of the so-called experimental governance architectures (EGAs) that are broadly defined as "recursive process[es] of provisional goal-setting and revision based on the comparison of alternative approaches to advancing them in different contexts" (Sabel and Zeitlin 2012, 170). Scholars and practitioners alike have considered EGAs to be especially suitable for addressing complex policy issues, such as persistent environmental problems, where the application of more traditional modes of regulation would not be feasible because of the significant heterogeneity of domestic policy settings (Sabel and Zeitlin 2010). Without pre-determining how exactly a given policy goal is to be pursued, EGAs give substantial discretion to lower-level units to advance shared goals in ways adapted to the local contexts. In turn, the implementing actors pledge to adopt common metrics, report regularly on their performance assessed against the agreed indicators, and take appropriate corrective measures based on the input of their peers (Sabel and Zeitlin 2008). Despite EGAs having become increasingly diffused, especially in the EU, their effectiveness and actual impact on policy-making processes remain largely unclear (Rangoni 2019).

The expected advantages of EGAs as a means of enhanced policy coordination, monitoring, and recursive evidence-based self-improvement appear to be highly relevant for the current debate on global environmental governance, which interrogates how local authorities and nonstate actors could be more closely engaged in a comprehensive climate governance framework led by multilateral institutions. The solution seems to lie in the creation of a joint collaborative framework that would build on previous experiences and boost new local efforts for tackling the complex problems of mitigation and adaptation through improved coordination, systematic

progress reporting, capacity building, and support of weaker organizations (Chan et al. 2015).

We maintain that an EGA perspective on the CoM experience may offer a number of valuable insights in this sense by providing evidence about the potential and shortcomings of experimental forms of transnational governance underpinned by the aforementioned features. Drawing on conceptual insights of the EGA scholarship, our analysis aims to understand whether the CoM EGA-type arrangements have been effective in encouraging local authorities to commit to shared objectives and targets, and to what extent this program has actually enhanced the engagement of its signatories in the process of recursive goal setting, monitoring, and learning.

The remainder of the present article proceeds as follows. After having introduced the main assumptions of the EGA approach, our analytical framework, and methods, we present the empirical findings, unveiling the general political uptake of the CoM and its implementation dynamics in six EU countries (France, Germany, Italy, Poland, Spain, and the United Kingdom). The concluding section summarizes the main research findings, presenting some insights on the still unfulfilled potential of the CoM, and outlines avenues for future research.

EGAs: Opportunities and Pitfalls

The diffusion of EGAs across a range of policy sectors, including financial regulation, environmental protection, and social cohesion, has been widely documented in the academic literature (Rangoni 2019; Zeitlin 2015). However, the conceptual contours of this research have remained somewhat blurred, as it has not provided a clear-cut definition of what EGAs are and how they can be analytically unpacked. According to the general framework within which EGAs have been theorized, they represent the kind of governance architectures that “provoke doubt about their own assumptions and practices, treat solutions as incomplete and corrigible, and produce an ongoing, reciprocal readjustment of ends and means through comparison of different approaches to advancing common general aims” (Zeitlin 2015, 6).

The seminal studies on EGAs (Sabel and Zeitlin 2010) have identified the following four institutionalized mechanisms through which EGAs operate: first, establishment of joint framework goals and metrics; second, elaboration of plans by lower-level units for achieving these goals; third, reporting, monitoring, and peer review of results; and fourth, recursive revision of goals, metrics, and procedures in light of implementation experience.

The underlying assumption here is that target actors’ orientations may converge as a result of enhanced interaction and self-correction processes within an EGA, which are enabled by a range of dedicated instruments, including templates, guidelines, discussion forums, and so on. Local actors have the autonomy to report problems with existing rules and explore alternatives, while the organizational center is obliged to take account of the local experience in reconsidering and

revising common rules. Therefore EGAs may offer a number of advantages for improving policy making compared with traditional forms of regulation by adopting common goals to varied local conditions rather than imposing one-size-fits-all solutions (Sabel and Zeitlin 2008; Zeitlin 2015).

Yet evidence has shown that EGAs may face several practical limitations, including coordination challenges, overlaps and duplication of responsibilities, formal rather than substantial involvement of participants, and an excessive degree of discretion that entails complexity and fragmentation (Sabel and Zeitlin 2008). Moreover, little analytical and empirical effort has been made to measure the relevance of specific instruments that EGAs introduce to achieve the expected benefits in terms of policy outcomes.

Unlike most EU EGAs, which involve central governments or their agencies, the CoM targets local authorities. It also engages other territorial and functional bodies that can help boost local efforts for developing sustainable energy, climate mitigation, and adaptation action within the framework of the EU climate and energy agenda. Although leaving a wide margin of discretion to local authorities in selecting implementation measures, the CoM has introduced a set of instruments to encourage its signatories to align their strategies with common policy goals and operational patterns.

The Covenant of Mayors Office (CoMO) is charged with the overall coordination of the program, while also ensuring the linkage between the EU institutions and a consortium of major transnational municipal networks (TMNs) that support the CoMO with their staff based on a framework contract provided by the EU Commission. The EU Joint Research Centre (JRC) is responsible for the approval of SECAPs, and it has prepared dedicated templates and methodological guidance to assist CoM members with developing the four main activities underlying the CoM EGA-type mechanisms: basic emission inventories (BEIs), which collect cross-sectoral data on carbon dioxide (CO₂) emissions at the local level; local SECAPs that express the commitment to EU climate goals and include a comprehensive local strategy for their achievement; a monitoring framework reporting the progress for all measures included in SECAPs; and benchmarking or good practices that establish a basis for self-evaluation and improvements.

Participation in the CoM is voluntary, but its signatories must meet a number of mandatory requirements to be part of the program. Each SECAP, which replaced the Sustainable Energy Action Plans (SEAPs) in 2015,¹ should be based on the data collected through the respective BEIs so as to cover the main sources of CO₂ emissions from the following policy sectors included in the CoM template: buildings, equipment/facilities, transport, industries, waste, and local energy. Within two years from the approval of SECAPs, signatories should report on their progress by developing monitoring reports, identifying at least three good practices of

1. The decision to support the implementation of the EU 40 percent greenhouse gas reduction by 2030 and adopt an integrated approach to climate change mitigation and adaptation was approved by the CoM on October 15, 2015 (<https://www.covenantofmayors.eu/about/covenant-initiative/origins-and-development.html>, last accessed April 29, 2020).

innovative and successful interventions implemented at the local level. The subsequent round of monitoring should be performed within two years from the publication of the first monitoring report, and it involves not only assessment of implemented measures but also a comprehensive review of local BEIs. All local documents (BEIs, SECAPs, monitoring plans, and good practices) are directly accessible on the CoM website. Local SECAPs are approved by the JRC, whereas the signatories who fail to comply with their commitments are expelled. The CoMO and the JRC oversee the implementation of the program and carry out periodic evaluations of its activities and impacts.

Furthermore, the CoM has developed a twofold strategy to support its signatories in acquiring and improving knowledge in the field of climate mitigation and adaptation policies. On one hand, it promotes information and training events (e.g., thematic workshops, conferences, webinars), involving highly qualified experts, experienced officers from member municipalities, and public servants of the EU Commission and its agencies. On the other hand, the CoM endorses the creation of multilevel partnerships, within which territorial coordinators (regions and provinces) and supporters (networks, agencies, etc.) may take action in their territories or areas of expertise (e.g., energy, environment, water, and air) to support CoM signatories on the ground.

This setup makes of the CoM an insightful case of substate “orchestration” (Abbott and Bernstein 2015) underpinned by an EGA, which may help overcome the failures of the earlier intergovernmental climate regime by steering local climate initiatives toward shared objectives through a comprehensive system of policy guidance, reporting, expert support, and capacity-building resources.

Research Questions and Method

By elaborating on the assumptions about the advantages of EGAs (Zeitlin 2015) and the new pathways for improved global climate governance suggested by the current political and academic debate (Chan et al. 2015), our analysis aims to understand whether and to what extent the CoM EGA-type arrangements have been effective not only in increasing the general political commitment of local authorities to the EU agenda for climate change and energy but also in enhancing the process of recursive goal setting, monitoring, and learning in this context. The higher the effectiveness of the CoM EGA is, the more participants it attracts, and the higher their engagement with specific coordination, monitoring, and learning instruments will be.

To operationalize the aforementioned propositions, we address the following research questions, which unpack the CoM policy output across the four typical EGA mechanisms of framework–rule making and revision.

RQ1: How extensive has the scope and political leverage of the CoM been?

The overall mobilizing potential of the CoM as a comprehensive transnational climate governance architecture can be appraised by analyzing the numerosity and

the geographic scope of its membership, spelling out also the factors that have accounted for its implementation dynamics across the different EU countries.

RQ2: How successful has the CoM been in establishing a joint framework of action based on common metrics, shared policy targets, and periodic monitoring and review procedures?

The effectiveness of the CoM EGA in activating its institutionalized mechanisms of “pledge and review” (Chan et al. 2015) can be measured by assessing whether and how timely its signatories elaborate their SECAPs, establish the monitoring schemes, and update their goals as a consequence of the revision of the program objectives.

RQ3: How relevant have the CoM methodological and policy guidelines been for designing, monitoring, and improving local climate strategies?

Our assessment of the CoM steering local climate actions will take into consideration the degree to which its signatories have referred to the common policy guidance when defining their policy priorities, selecting instruments, and establishing monitoring and review methodologies.

RQ4: To what extent has the CoM enabled the process of recursive learning in light of implementation experience?

To understand whether the CoM has actually performed as an “engine of learning from diversity” (Zeitlin 2015), we investigate whether it has contributed to activating a comprehensive process of recursive review and to what extent its signatories have deployed the various learning tools supported by the program to acquire new knowledge, build new relationships, or scale up existing initiatives.

The countries selected for an in-depth empirical inquiry—Italy, Spain, Germany, France, Poland, and the United Kingdom—are home to two-thirds of the CoM signatories. Also, they represent a great variety of context conditions in terms of their consolidation of national climate policies, which have proved to be an important factor determining city climate strategies (Heidrich et al. 2016).

Our empirical analysis draws on desk sources, including CoM reports and the data available on its website; local SECAP policy documents; and a survey and sixteen semistructured interviews with local officials charged with CoM-related activities in the six countries. The questions included in the survey and interviews aimed to discover the factors that mainly account for the implementation dynamics of the program, disclosing local authorities’ motivation to join the CoM; the degree of their commitment; their views about the relevance of the program instruments for designing, monitoring, and implementing local strategies; and their perceptions about the opportunities that the CoM provides for improving local knowledge on climate policies through benchmarking, training, and networking.

The survey was sent to all CoM signatories (as of April 2018) in Germany (63), Poland (40), and the UK (36). Because of a very high number of signatories in Italy (4,012) and Spain (1,826), a sample of 100 municipalities was selected in these

countries to cover municipalities of different sizes, geographic areas, and years of adhesion. The number of completed questionnaires from each country is as follows: Germany, 5 (8.6 percent); Italy, 28 (28 percent); Poland, 5 (12.5 percent); Spain, 27 (27 percent); and the United Kingdom, 5 (7.1 percent). We conducted the semi-structured interviews in Italy (6), France (3), Germany (3), Poland (2), Spain (1), and the United Kingdom (4) to obtain a more nuanced view of the issues addressed by the survey.²

The Scope and Political Leverage of the CoM

The general political uptake of the CoM appears to be significant. After its launch in 2008, the number of CoM signatories achieved 9,664 as of October 2019. Importantly, the CoM membership includes not only local authorities but also other territorial bodies (provinces, regions, etc.) and specialized agencies, which act as territorial coordinators and supporters, and counted, respectively, 219 and 198 members on the same date. The geographical scope of the program has progressively expanded too, also beyond EU borders. It has strengthened collaborative linkages with global TMNs (e.g., ICLEI) and ultimately institutionalized partnership with the Global Compact of Mayors in 2017, thereby giving birth to the Global Covenant of Mayors for Climate and Energy—the world’s largest city network for climate.

However, as Table 1 illustrates, the CoM’s success varies significantly across countries. Around half of CoM signatories come from Italy, which is followed by Spain. By contrast, Germany, Finland, Austria, and the United Kingdom are the EU member states with the lowest number of participating municipalities. Among the sample countries, Italy is leading, with approximately 50 percent of municipalities signed up for the program, followed by Spain, with 23 percent. The share of participating municipalities has been significantly lower in Poland (4.3 percent), Germany (0.5 percent), the United Kingdom (0.5 percent), and France (0.3 percent), although the gap between the countries is narrower if we consider the municipalities’ populations.

As Figure 1 shows, most CoM signatories in the United Kingdom, Germany, and Poland are large and very large cities, while most participating municipalities in Italy and Spain are small or medium sized, with populations ranging between 50,000 and 250,000 inhabitants.

2. Interview 1, Borough of Poole, officer, June 2017; interview 2, Municipality of Glasgow, officer, June 2017; interview 3, Municipality of Leeds, officer, June 2017; interview 4, Municipality of Durham, officer, June 2017; interview 5, Municipality of Padova, officer, May 2016; interview 6, Municipality of Palermo, officer, May 2017; interview 7, Municipality of Pesaro, officer, May 2017; interview 8, Municipality of Bari, July 2017; interview 9, Municipality of Bologna, July 2017; interview 10, Municipality of Venice, July 2017; interview 11, Municipality of Munich, officer, September 2017; interview 12, Municipality of Heidelberg, officer, September 2017; interview 13, Municipality of Dusseldorf, officer, September 2017; interview 14, Municipality of Wrocław, officer, January 2018; interview 15, Municipality of Warsaw, officer, January 2018; interview 16, Local Energy Agency of Lyon, officer, July 2013; interview 17, Rennes Metropolis, officer, November 2014; interview 18, Intermunicipal Association of Val d’Ille, officer, December 2014; interview 19, regional coordinator of Catalonia, January 2018.

Table 1
CoM Signatories of the Total Number of Municipalities per Country

	France	Germany	Italy	Poland	Spain	United Kingdom
CoM signatories	113	63	4,012	40	1,826	36
Total number of municipalities	35.357	12.031	7.978	923	8.122	7.727
Share of CoM signatories (%)	0.3	0.5	50.4	4.3	22.5	0.5

Authors’ analysis of the data reported on the CoM website as of 2018 (<https://www.covenantofmayors.eu/>, last accessed April 29, 2020).

These data prove a strong potential of the CoM as an EGA, since regardless of the differences in the degree of consolidation of local climate policies across EU countries, the program has collected an impressive number of signatories, surpassing the largest TMNs. Moreover, unlike most existing TMNs, which were promoted by leading global and European cities, the CoM has widely mobilized small- and medium-sized municipalities from suburban and even rural areas. This group of cities has far lower capacity for developing climate policies than larger groups do, but the effectiveness of local climate governance strongly depends on them, given their high potential for CO₂ emission reductions (Kern 2019).

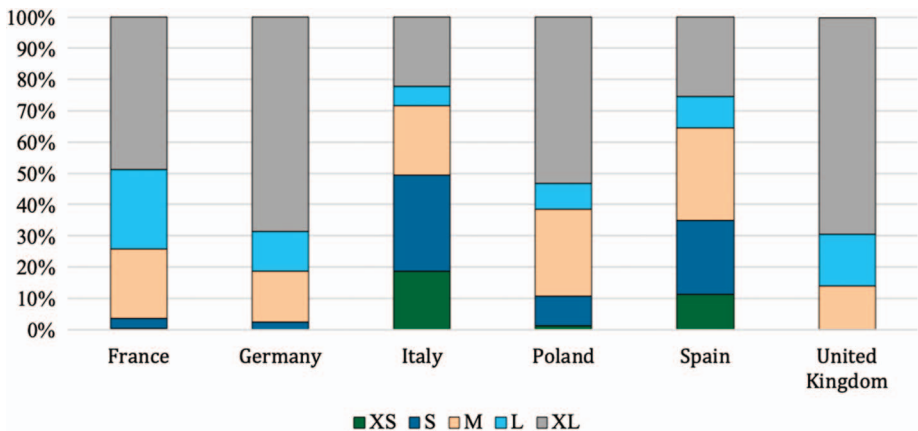


Figure 1
CoM Signatories per Size in the Six Countries (Percentage of the Total Membership per Country)

Source: Authors’ elaboration on the data reported on the CoM website as of September 2018 (<https://www.covenantofmayors.eu/>, last accessed April 29, 2020).

Our interviews and the survey provide further interesting insights regarding the political relevance of the CoM and the factors accounting for its implementation. The overwhelming success of the CoM in Italy and Spain appears to have been mainly due to the lack of domestic programs for local sustainable energy and climate: “We signed up for the CoM because we needed a guidance for building our sustainable development policies, which was totally missing at the national level” (interview 7). Our survey shows that municipalities in both countries have widely perceived the CoM to be very important for building or upgrading their sustainable energy and climate strategies: 78 percent of respondents have shared this view. In Italy, the local authorities have used the CoM to finally comply with the obligation to develop local plans for municipalities with more than 50,000 inhabitants, as introduced by Law 10/1991 (Domorenok 2019).

By contrast, only a few Polish municipalities have joined the CoM (4.3 percent), although consolidated climate policies were lacking in this country too. As a Polish municipal officer explained, “the CoM is a valuable instrument for both developing and improving local sustainable energy strategies and increasing general political awareness about climate issues . . . , but municipalities lack staff, expertise, and funding required for the CoM activities” (interview 15). The foremost political priority for economic development and employment issues was also mentioned as among the most important obstacles preventing many Polish municipalities from joining the program.

In France, the number of signatories has been limited because many municipalities perceived the CoM as a useful source of knowledge for developing local climate policies only until the national energy agency Agence de l’environnement et de la maîtrise de l’énergie (ADEME) provided them with national tools and benchmarks (interviews 16–18). At the same time, French signatories have widely viewed the CoM as an important EU-level recognition for local authorities’ contribution to climate governance and as a valuable political resource for lobbying in the run-up to the French energy transition acts. Several French associations of sub-state authorities have joined the program as Covenant supporters, and sessions of the national Covenant club have served to develop a common position paper (Bendlin 2020).

The low number of participating municipalities in Germany (0.5 percent) results from the fact that several national and regional programs with similar objectives had been implemented in the country prior to the CoM. According to our survey, German municipalities considered the CoM to be of limited relevance for fine-tuning their local climate planning and monitoring schemes. Rather, as a policy officer suggested, “the CoM has been a guarantee for preserving existing climate plans against volatile political agendas and a means of enhancing the international visibility of cities” (interview 8).

As for the United Kingdom, our interviewees (interviews 1–4) and the survey respondents were unanimous in the opinion that the objective to increase international visibility and/or strengthen cooperative networks at the trans-European level was among the main impetus to join the CoM, whereas its policy guidance

appeared to be of limited relevance compared with the domestic planning and monitoring schemes.

In addition, in all the countries studied, the survey participants stressed the importance of the CoM's symbolic dimension for local politics. According to nearly 90 percent of respondents, participation in the program was viewed as furthering the possibility to increase political visibility and the cities' international profiles by directly accessing the European political arena. The majority of the survey participants (85 percent) also stressed that part of the CoM's value is the important recognition it attracts of the local political commitment to climate objectives at the EU scale.

The political and operational support of upper territorial levels has been another important factor to the CoM's success. For example, the Lombardy region, which has the highest number of signatories in Italy, was among the first to introduce a regional energy environmental plan, along with specific supporting measures for municipalities participating in the CoM. In Spain, most signatories come from the autonomous communities (ACs) of Andalusia, Aragon, Catalonia, and Valencia. Catalonia approved a framework plan for climate change mitigation in 2008 and was the first AC in Spain to approve a regional climate change law in 2017, whereas Valencia has encouraged municipalities to develop their emission inventories and sustainable energy plans since 2010 and has provided CoM signatories with dedicated funding for improving energy efficiency in municipal facilities.

Similarly, various forms of subregional territorial aggregation have facilitated municipal participation in the CoM, particularly in Italy and France. For example, the intermunicipal association Rennes Metropolis, engaged as a Covenant coordinator, has assigned the regional energy agency to support CoM signatories in developing and implementing SECAPs. Thirty-four out of thirty-seven affiliated municipalities in the association's territory signed the CoM. In Italy, the creation of local subregional climate partnerships was supported, among others, by the provinces of Aquila, Bergamo, and Chieti.

Hence the CoM political uptake was higher in those contexts where no similar domestic schemes existed before and where the strong local ownership of its activities was coupled with the support of upper territorial bodies in terms of financial resources, regulatory guidance, or expertise. Although there has been consensus about the high symbolic and practical importance of the CoM among the interviewees, the described asymmetries in its implementation indicate that limitations exist for its accomplishment as a comprehensive governance framework for local climate action in the EU. The following analysis brings to light a number of such weaknesses.

Committing to the Common Framework of Action: A Multispeed Process

The establishment of the CoM coordination and monitoring framework has been neither fast nor automatic. The formal commitment of local authorities to the

program is sealed by the dedicated adhesion form, which the mayor or a representative of the local council signs after the municipal assembly has approved the decision. However, to translate this symbolic commitment into practice, signatories must accomplish the following four main actions, around which the CoM-institutionalized EGA-type mechanisms revolve: the preparation of local BEIs and SECAPs, the establishment of the monitoring procedures, the revision of local objectives based on the implementation experience and/or upgraded CoM objectives, and the selection of good practices to share with the CoM community.

Ideally, a SECAP should be submitted within two years of the CoM signature, but many signatories describe the preparatory phase as a time-consuming and complex process. As our interviews have explained, the formulation and approval of local action plans require not only political commitment to the CoM objectives at the local level but also that technical requirements concerning the local plan and policy measures be met. Accordingly, specific knowledge and expertise have been needed to define a range of measures to include in SECAPs within the policy sectors identified in the CoM's template, here taking into account both the level of CO₂ emissions reported in the local BEIs and the CoM goals and targets.

The speed with which local authorities have complied with the aforementioned tasks has varied much across countries, as Figure 2 shows. The shortage of financial resources along with missing data on emissions and limited technical knowledge available in local public administrations have been among the main barriers to the timely and complete preparation of BEIs and SECAPs (Van der Veen et al. 2013).

These obstacles have been successfully overcome with the support of external experts or territorial coordinators in those municipalities where strong political or administrative ownership of the CoM existed. In fact, among the six countries of the sample, Poland and Italy show the lowest share of municipalities that have

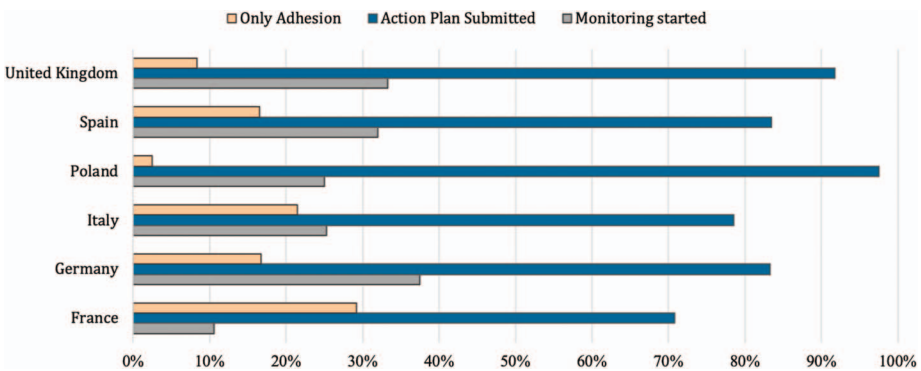


Figure 2
Status of CoM Membership

Source: Authors' elaboration on the data reported on the CoM website as of September 2018 (<https://www.covenantofmayors.eu/>, last accessed April 29, 2020).

signed up but not yet submitted their plans, regardless of the substantial lack of expert knowledge and experience required for developing such documents reported by our survey interviewees in these countries.

The implementation of the monitoring procedure has been even more problematic, with particularly slow progress in the countries where previous domestic schemes did not exist. As Figure 2 shows, in Italy and Poland, the share of signatories implementing monitoring amounted to approximately 24 percent as of June 2018, compared with almost 40 percent in Germany and the United Kingdom. The interviews largely mentioned a lack of internal expertise in municipal administration and the shortage of financial and human resources as the most relevant barriers to timely and successful implementation of the procedure. The number of monitored plans has been the lowest in France, where the signatories are still in the process of adapting the tools introduced by the national energy agency ADEME and often perceive the overall workload of reporting as prohibitive (interviews 16–18).

Significant territorial differences have been observed in all the countries with regard to both the speed of submission of SECAPs and the establishment of the monitoring procedures. For example, among the regions that are home to the most German signatories, 92.3 percent of the signatories have submitted SEAPs in Baden–Wurtemberg, compared with 66.6 percent in North Rhine–Westphalia and 55.9 percent in Bavaria. In Italy, more than half of the signatories from the north have respected the one-year time frame set by the EU, whereas it has taken more than two to three years for more than half of Italian signatories from the southern regions to submit their plans. Among the Polish regions, most signatories from Pomerania and Silesia approved their SEAPs in one year. In Spain, a number of provinces have been leading in terms of both SEAP submission and monitoring, such as the Catalonian province of Tarragona, where 100 percent of the municipalities have submitted their SEAPs. In Girona and Lleida, 57 percent and 55 percent of municipalities, respectively, submitted their SEAPs.

According to the data reported by Figure 3, the propensity of the CoM signatories to review their objectives and targets following the overall revision of the program’s objectives in 2015 has also differed greatly across the studied countries. Most Polish and Italian signatories have maintained a 2020 target, while German and UK signatories have aligned their goals with ambitious adaptation objectives and the 2030 targets because of the revision of the CoM objectives in 2015. In Spain, 279 out of the 316 signatories (as of December 2018) joined the CoM after 2015, thus committing to the upgraded program objectives.

The CoM mechanism of benchmarking is closely linked to the activation of the monitoring procedure: when starting the monitoring phase, the municipalities are required to report at least three adaptation and three mitigation benchmarks. Benchmarks, or “good practices,” are shared directly through the CoM web platform, where a short summary of successful experiences should be published, along with the indication of the sector, timing, and costs of realization. A detailed description of the implemented actions should be accessible at the link to the

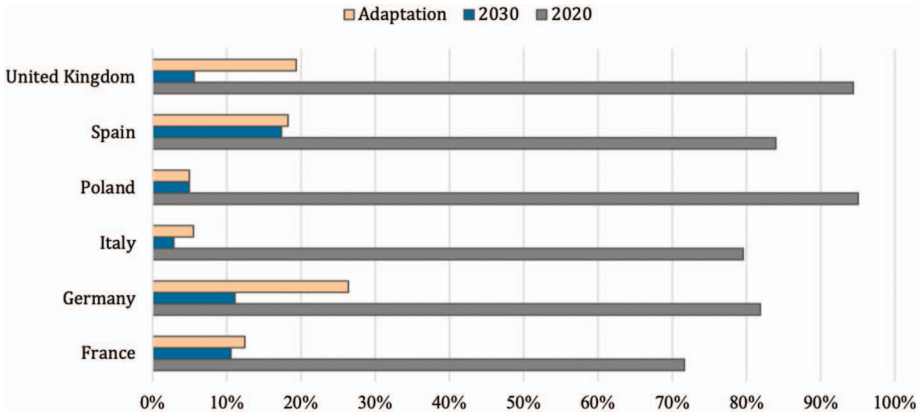


Figure 3
Expected Targets in the Six Countries

Source: Authors' elaboration on the data reported on the CoM website as of September 2018 (<https://www.covenantofmayors.eu/>, last accessed April 29, 2020).

original web page that reports the benchmark. This mechanism has been expected to provide insights for municipalities regarding how to improve their performance by borrowing from others' experiences.

Interestingly, as Table 2 shows, small- and medium-sized municipalities in all the studied countries, particularly in Italy and Spain, have been very proactive in both developing the monitoring procedure and sharing benchmarks, which may seem surprising given that these cities appear to be less equipped than larger ones for developing advanced policy solutions for sustainable energy

Table 2
Share of Benchmarks by Size of Municipality on the Total Number of Benchmarks Collected in Six Countries (percent)

Municipality Size	Country					
	France	Germany	Italy	Poland	Spain	United Kingdom
<10,000	0	0	48.4	0	71.4	0
<50,000	13.2	26.3	20.2	27.5	22.8	0
<250,000	11.3	36.1	3.3	25.0	6.4	25.0
<500,000	11.3	8.3	0.3	0	0.8	33.3
>500,000	64.1	36.1	0.3	7.5	0.4	16.6

Authors' analysis of the data reported on the CoM website as of 2018 (<https://www.covenantofmayors.eu/>, last accessed April 29, 2020).

and climate. Only in France and the United Kingdom do most of the good practices (and, accordingly, monitoring procedures) come from large and very large cities. This evidence challenges the conclusions of previous research, according to which larger cities have been leading global climate governance (Kern 2019).

Thus the CoM has been rather successful in establishing a wide-scale register of local climate policies based on a set of shared goals and criteria, while the implementation of the monitoring and review procedures has proved to be more cumbersome. Both political commitment and sufficient levels of technical expertise were crucial for completing the preparation of BEIs and SECAPs, whereas the realization of the monitoring framework and policy review involved much more substantial efforts in terms of policy knowledge and experience.

Engaging with Common Metrics, Policy Guidelines, and Instruments

Not only did the speed of implementation of the formal requirements related to the core strands of CoM activity differ significantly across the studied countries but also the relevance of the CoM policy and methodological guidelines for developing local climate policy instruments has varied from context to context.

According to our interviews, signatories from the countries with consolidated climate mitigation policies and instruments, such as Germany and the United Kingdom, developed local energy and climate plans and emissions inventories before joining the CoM. Consequently, they had to adjust existing schemes to the EU framework by translating their plans into the CoM templates. This has naturally entailed adaptation costs that local officers have oftentimes perceived as an unnecessary duplication (interviews 2, 11, 13). By contrast, municipalities that totally or partially lacked such instruments have used the CoM to design or substantially upgrade their policy frameworks by building on the CoM methodology and guidelines. Therefore the CoM policy impact has been more significant in the latter group of countries, although, as the interviewees explained, the implementation of the CoM activities has required a substantial amount of effort in terms of policy innovation and the overall change in the policy-making style from a sectoral to a more integrated approach (interviews 6–7, 14–15). In addition to developing new policy instruments (i.e., BEIs and SECAPs), signatories in these countries had to establish coordination mechanisms between different sectoral units (e.g., public buildings, transport, lighting, waste) involved in implementing SECAPs, which has often been uncommon for traditional local policies (interviews 5–7).

Implementing the monitoring procedure has shown similar trends. The municipal officers we interviewed in Germany and the United Kingdom, where the rate of completed monitoring reports was highest, admitted that implementing the CoM monitoring framework has required a formal adjustment rather than substantial revision. Past experiences in domestic climate policy making and reporting and the availability of competent staff and data on hand have greatly facilitated this process (interviews 2–4, 12–13). Our interviews have also suggested that notwithstanding the administrative costs related to adjusting the CoM framework

to the domestic one, the monitoring exercise promoted by the CoM has been important, and it should be further strengthened to enable more effective evaluation of individual progress and the development of benchmarks in the CoM community. As one interviewee stated, “it gives us the measures on how to control the process, to understand where are we in this process and of course to have the possibility to make comparison to the other administrations” (interview 12).

The lack of capacity at the local level has often been compensated by territorial coordinators and supporters who took care of translating EU standards into domestic policy frameworks (Melica et al. 2018). In Spain and Italy, the technical and financial resources required for complying with CoM guidance have often been supplied by regional or provincial authorities, while in Poland, the external consultancies and networks of local authorities have widely assisted CoM signatories (interviews 14–15) with preparing the required documents and with capacity building.

Overall, our findings confirm that local authorities have widely appreciated the CoM policy and methodological guidance for energy planning and monitoring, although the overlaps between the CoM instruments and existing domestic schemes has resulted in practical difficulties in bridging the two schemes (interviews 1–4, 11–12). The considerable differences in local capacity in terms of expert knowledge, experience, and financial resources have determined the strong variation in the implementation dynamics of the CoM (interviews 5–10, 11–12, 19). Most of the interviewees in Italy, Germany, and Poland have suggested that the size of municipalities has not been decisive for their capacity to implement either the monitoring procedure or benchmarking. The latter instrument has been widely appreciated as a source of useful insights for innovative solutions to adopt at the local level.

The case of France is particularly interesting for observing how the attitude of local authorities to the CoM may change as a consequence of evolving domestic conditions. The French national legislation introduced voluntary climate action plans in 2004, with the obligation to complete them by 2012 for municipalities with more than 50,000 inhabitants. Most French signatories joined the CoM before 2011, when the national energy agency was not yet prepared to respond to local authorities’ need for guidance and the tools required for establishing BEIs or designing local action plans. As soon as the national and regional energy agencies had issued national templates and their related methodological tools, the French municipalities started perceiving the CoM reporting obligations as overlapping and burdensome and thus failed to comply. Some municipalities have been suspended or expelled because of their failure to fulfill these obligations; others have decided not to join the program after having learned from their peers about the huge workload related to reporting.

Exploring the CoM’s Potential for Reflexive Learning

The process of recursive learning has been deemed one of the most important inherent advantages of EGAs. Although an in-depth understanding of the

different forms of learning enabled by the CoM would require full-fledged dedicated research, the following analysis summarizes some preliminary findings about how and to what extent the CoM has actually encouraged different forms of learning.

Policy learning is conceived of here as a process of a change in policy actors' beliefs—whether the ideas that underpin them, their performance, or the governance mechanisms of policy making (Dunlop and Radaelli 2018). Regarding the question of “who” learns, the CoM has provided its signatories, territorial coordinators, and supporters with a considerable amount of general information and expert knowledge on climate policy instruments and novel modes of governance that could be deployed to improve sustainable energy and climate policies at the local level. Most respondents to the survey shared the opinion that the process of preparation and implementation of local action plans has not only contributed to increasing their expertise in the field of climate policies but also helped strengthen coordination within local administrations and encouraged the establishment of collaborative partnerships between different territorial levels as well as with private companies, energy consultancies, NGOs, research institutes, and local communities. An Italian interviewee put it this way: “We had a serious debate with local stakeholders and worked for two years with local associations and NGOs to broaden our knowledge and ideas in the field of sustainable energy” (interview 6). The CoM recursive policy cycle offers important learning opportunities also to the European Commission (DG Energy), the CoMO, and the JRC, which are involved in periodic assessments and evaluations of the CoM's progress, resulting in program adjustments and revisions. For instance, the timeline for SECAP submission has been extended to two years because many early signatories struggled with completing their SEAPs within the former one-year deadline. The CoMO was reorganized to better respond to the signatories' inquiries, here creating country-specific help desks. Also, the introduction of climate adaptation requirements and the establishment of the CoM's political board aimed at meeting the new needs of evolving political agendas and requests expressed by participants and networks running the CoMO. However, the CoM's recursive learning potential has been underexplored because no regular time frame or systematic methodology existed for evaluating its performance and outputs.

With regard to the question “how” the Covenant has enabled learning, along with specific templates and methodological documents on a wide range of issues related to sustainable energy and climate mitigation and adaptation, the CoM has promoted the following learning-facilitating activities: thematic conferences and information events; publication of all local documents (SECAPs, monitoring, and benchmarking) on the program's website so its signatories can learn from others' practices and experiences; and specific training, workshops, and webinars. These aforementioned activities have been underpinned by the idea that solutions are somewhere in the network and that coordination through common methodological instruments, metrics, and benchmarks may trigger learning dynamics among CoM signatories.

However, the number of participants of various events as well as the number of downloads of methodological documents have been limited. According to the survey and interviews, the policy officers from Italy, Poland, and Spain, when compared with other countries of the sample, have more frequently deployed and appreciated the aforementioned instruments. Only approximately one-third of the respondents stated that they had participated in or promoted such activities. By contrast, local authorities have often used the CoM to upscale existing initiatives or promote transnational cooperation projects, particularly in view of obtaining EU competitive funding for developing advanced methodologies for energy efficiency and climate. As a policy officer from the United Kingdom emphasized, “there was a faster maturity of the city on the need to build cooperative networks, also thanks to the cooperation with international organizations like Eurocities. That kind of cooperation gave us good examples of how to exchange good practices” (interview 7).

As the interviewees emphasized, the learning effect of the CoM has been lower where its instruments overlap with existing domestic city networks with similar functions. For example, many CoM signatories in Germany and France are also members of Climate Alliance and Energy Cities, which are considered much more relevant for exchange and peer learning than the CoM: “[Energy Cities] is the interlocutor that one identifies as being the animator and structure that circulates information here [in France]” (interview 16).

Conclusions

This analysis provides a number of insights into the opportunities and drawbacks that advanced forms of orchestration of local climate action may offer, with a view toward designing a comprehensive governance framework integrating multilateral and transnational processes. The example of the CoM EGA-type setting shows that a set of institutionalized mechanisms of coordinated goal setting, monitoring, and evidence-based review can actually steer local authorities to develop or upgrade their climate strategies, entailing also policy and governance innovations on the ground. However, a number of operational difficulties that the CoM has faced confirm that these experimental forms are far from unproblematic.

Our findings have brought to light that the CoM has been successful in enhancing general political commitment to shared policy objectives and goals and in establishing a wide-scale registry of local climate mitigation and adaptation plans. Its contribution to the reduction of CO₂ emissions has also proved to be considerable (Crocì et al. 2016). Importantly, the program has achieved an extensive geographic scope and established a systematic framework based on well-defined political objectives implying a range of policy planning and reporting obligations for its signatories. Furthermore, the CoM has reached a sizable number of small- and medium-sized municipalities that almost totally lacked knowledge and experience in sustainable energy and climate. These features distinguish the program from TMNs (Bulkeley and Betsill 2013), which perform somewhat similar functions in

terms of sharing knowledge and exhibiting political leadership but lack a long-term perspective, a strategic political guide, and, most importantly, systematic monitoring and review of implementation performance.

However, the activation of evaluative, monitoring, and benchmarking activities has encountered several difficulties, mainly because of the lack of knowledge and experience among the program signatories. At the same time, local authorities have scarcely deployed the capacity-building instruments promoted by the program. The lack of financial and human resources has strongly hampered the CoM's implementation, in particular in those contexts where the political and operational support offered to the CoM signatories by upper territorial bodies has been missing.

Lastly, the fact that a limited number of municipalities from the countries with consolidated climate policies have joined the program seriously undermines the CoM's ambition to establish a comprehensive, wide-scale coordination framework for local climate action. The potential of large cities with well-developed climate strategies, which have joined the CoM regardless of the administrative burden membership entails, appears to be underexplored, especially in terms of peer-to-peer learning.

Thus, if the ambition is to go beyond the symbolic commitment of local authorities to EU climate objectives, major efforts would be needed to fine-tune this program, taking into account at least the following three sets of factors: first, the diversity of policy and governance settings across countries; second, specific local capacities and needs; and third, potential overlaps between the CoM and other forms of national and transnational climate governance. Strengthening the political and regulatory importance of the program for achieving EU policy goals and targets and consolidating its EGA-type mechanisms (i.e., regular reporting and monitoring, comprehensive systematic assessment, structured peer review) would contribute to the CoM's legitimation, also vis-à-vis a multitude of self-governing TMNs with which it partially overlaps (Bansard et al. 2017).

These conclusions provide some useful insights into the debate about how experimental initiatives involving capacity building, multilevel rescaling, and networking matter for global climate governance (Bernstein and Hoffmann 2018; Kern 2019). Wider-scale empirical studies covering a bigger sample of countries (also beyond the EU) and additional analytical efforts unpacking EGA policy outputs would help in further exploring the potential of the CoM with a view to identifying the appropriate design principles for a new comprehensive global climate governance framework (Chan et al. 2015). Yet future research is needed to substantiate the normative claims about EGAs' potential for increasing the problem-solving capacity of complex jurisdictions and for confirming the political relevance of experimental multilevel governance settings for building an effective global climate regime (Chan et al. 2015; Jordan et al. 2012).

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