

Sustainable Urban Mobility Plans: a catalyst for transformative urban practices?

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Abstract

Sustainable Urban Mobility Plans (SUMP) are strategic planning tools to govern the urban mobility system for a better quality of life. However, their capacity in bringing about effective changes is limited, also due to the governance system in which they are embedded. This paper comparatively examines the multilevel governance framework of sustainable urban mobility planning in 8 case studies across Europe, considering SUMP as part of their spatial governance and planning system. First, it analyses the interaction between the urban legal framework and the SUMP. Then, it analyses practices in one case study from the JUST STREETS project. The paper sheds light on the possibility of SUMP as catalysts for transformative practices contributing to mobility justice, and the room for improvement in this respect.

Keywords: Sustainability Urban Mobility Plans (SUMP), spatial governance and planning system (SGPS), Multilevel governance, mobility justice, JUST STREETS

1. Introduction

Sustainable Urban Mobility Plans (SUMP) are strategic planning tools meant to improve mobility patterns in cities and their surroundings for a better quality of life. According to the European Commission, "A SUMP offers a comprehensive, vision-led, flexible and resilient approach by serving as a long-term mobility plan that includes packages of measures addressing short-term objectives and targets the reaching of which can be fast-tracked in response to changing needs." (EUR-Lex - 32023H0550 – EN). However, the capacity of SUMP and other similar mobility planning instruments in bringing about effective changes towards more sustainable and just mobility practices has been questioned (Maltese, Gatta and Marcucci, 2021; Wågsæther et al., 2022; Hidayati and Tan, 2025) social, and environmental issues in transport policy at the urban scale from a long-term strategic perspective. Indeed, urban policymakers intend adopting measures to cope with the negative externalities generated by transport. The focus is on reducing traffic flows (number and length). Aiming to shed light on the matter, this paper starts from the assumption that in order to understand the effectiveness of SUMP it is necessary to consider them as part of a spatial governance and planning system (SGPS). SGPSs reflect the complex and multidimensional interaction among the urban legal framework (Berisha et al., 2021). This interaction shapes and determines the possibility for SUMP to improve urban mobility towards more sustainable and just mobility practices. By combining literature, policy and document analysis, the paper comparatively examines the multilevel governance framework of sustainable urban mobility planning across Europe, through the analysis of 8 case studies from the JUST STREETS project, analysing the multilevel frameworks in which the 8 SUMP are developed and implemented, from the European to the local scale. The paper is organised as follows: first, in the next section, the concept of SGPS is briefly presented, together with a focus on the origin and aims of SUMP and their supposed role in fostering more sustainable and just mobility practices. Section 3 analyses the multilevel governance frameworks that shape the development and implementation of Sustainable Urban Mobility Plans (SUMP) across eight European pilot cities involved in the JUST STREETS project: Amsterdam, Braga, Cugir, Kozani, London-Wesminster, Metropolitan City of Milan, Riga, Vilnius. The interaction between the urban legal framework

(structure) and the SUMP (tools) is inquired. Section 4 brings the lens closer to practices, focusing on one local case study from the JUST STREETS project, the Metropolitan City of Milan – Corsico municipality. It analyses the mutual interactions between the Metropolitan planning tools (including the SUMP), and municipal planning and practices. Overall, the paper sheds light on the possibility of SUMPs as a catalyst for actually contributing to mobility justice, and the room for improvement in this respect.

2.SUMPs within Spatial Governance and Planning Systems framework

Spatial governance and planning systems (SGPSs) are institutional arrangements that guide and control spatial development in accordance with property rights, public interest, and market forces. They emerge from a complex and multidimensional interplay among several key components: the legal framework or structure, the tools for spatial planning, the practices that enact planning, and the discourses that shape and reinterpret them over time (Berisha et al., 2021). Sustainable Urban Mobility Plans (SUMPs) are among the crucial spatial planning tools within this framework, steering urban transformation by integrating land use, mobility, and environmental considerations into cohesive strategies.

The structure of SGPSs establishes the foundational legal and administrative rules for spatial development, providing a framework for decision-making and governance. Tools like SUMPs translate these rules into planning, setting out visions, goals, and regulatory instruments that respond to dynamic urban contexts and sustainability imperatives. Practices encompass the concrete ways in which these plans are implemented, adapted, or contested by various actors, from public authorities to private developers and community stakeholders. Meanwhile, discourses, i.e. narratives and debates surrounding urban planning, inform how these structures and tools are interpreted, negotiated, and legitimized, shaping shared understandings of public interest, urban futures, and governance priorities. Together, these interwoven dimensions of SGPSs determine the capacity of public authorities to influence urban change, manage development pressures, and promote sustainable, equitable, and resilient urban environments.

SUMPs, as key tools within SGPSs, exemplify the importance of strategic, integrative approaches to urban development and mobility in this broader governance landscape. Moving beyond car-centric paradigms, SUMPs embody the shift towards people-centered, low-emission, and equitable transport systems that address not only mobility needs but also broader environmental, social, and economic goals in urban and peri-urban areas (Jordová, 2021). In this sense, SUMPs are more than mobility strategies; they are integral instruments of SGPSs, embedded in and shaped by the interplay of legal frameworks, planning practices, and discursive narratives.

The European Commission (2019) defines the core objectives of SUMPs as enhancing accessibility and quality of life for all, including marginalized groups; ensuring environmental sustainability through pollution reduction and modal shifts; promoting social equity by recognizing the needs of disadvantaged populations; improving health and safety through active mobility; and fostering integrated policy and governance across sectors such as transport, land use, health, and energy. The SUMP process should follow a 12-step iterative methodology (European Commission, 2019) that spans preparation, visioning, implementation, and monitoring. It begins with establishing inclusive governance structures and stakeholder engagement to ensure that planning is transparent and participatory. Cities assess the current mobility context, identify spatial inequalities, and co-develop scenarios to envision inclusive futures. These scenarios should inform strategic visions, translated into SMART targets (i.e. Specific, Measurable, Achievable, Relevant, Time-bound), and operationalized through integrated policy packages that balance infrastructure investments and behavioral interventions. Implementation is phased, flexible, and subject to continuous review. Success depends not only on technical soundness but also on responsiveness to community feedback and urban dynamics.

To align SUMPs with the ideals of just transition, a shift to transformative governance is necessary (Schwanen, 2021). This includes i) actively dismantling automobility dominance and enabling inclusive active transport; ii) co-producing policies with underrepresented communities; iii) evaluating interdependencies between mobility, housing, and social systems; and iv) recognizing spatial and temporal inequities that affect access and agency. Ultimately, the success of SUMPs depends not only on achieving emission targets but on cultivating mobility systems that are resilient, inclusive, and co-owned by diverse urban communities.

However, while SUMP offers a promising pathway for urban transformation, their justice implications must be fully addressed. More generally, the literature on SPGS shows gaps in the consideration of justice implications. Wågsæther et al. (2022) warn of “justice pitfalls” (ibid) in sustainability transitions, such as tolling systems or densification strategies that inadvertently burden low-income or marginalised groups. Schwanen (2021) expands this perspective, arguing that distributive justice alone is insufficient. Equally critical are procedural justice, which ensures inclusive and meaningful participation, and recognition justice, which acknowledges the diversity of mobility needs and lived experiences. SUMP that narrowly focus on climate and efficiency targets risk marginalizing the very groups they aim to uplift. Further, Schwanen calls for attention to epistemic justice, i.e. valuing local and marginalised knowledge systems, requires expanding planning practices to include storytelling, participatory mapping, and deliberative forums that centre non-dominant voices.

3.The multilevel governance of sustainable urban mobility planning in JUST STREETS' cities

This section analyses the multilevel governance frameworks that shape the development and implementation of Sustainable Urban Mobility Plans (SUMP) across eight European pilot cities involved in the JUST STREETS project and leveraging on the results of the CIVITAS' analysis of SUMP (2018). These cities represent a wide range of governance systems ranging from strongly centralised systems with top-down decision-making to more decentralised or multilevel frameworks that rely on bottom-up collaboration, negotiation, and adaptive planning. The analysis also explores the legal frameworks (structure) in which SUMP (tools) are conceived, shedding light on how authority and responsibilities are distributed among national, regional, and local authorities as well as the varying capacities of these levels to implement mobility strategies (Tables 1 and 2).

Considering their SGPS frameworks, JUST STREETS countries can be clustered into three main models: conformance systems, neo-performative systems, and performative systems (Berisha et al., 2021). Each model reflects a distinct approach to how public authorities manage spatial development and how they balance state control with market forces in urban planning, and this influences SUMP development, as one of the main tools for mobility planning.

The conformance systems cluster includes Italy, Portugal, Romania, and Greece. These countries rely on comprehensive, binding general plans as the primary instrument for steering urban transformations. These plans are meant to establish a clear legal framework and guide spatial development decisions. In practice, however, they often incorporate mechanisms for modifications and adjustments, such as variants in Italy or amendments in Greece and Portugal, enabling flexibility in responding to shifting market demands or political pressures. This dual character of rigidity and adaptability underscores a dynamic interplay between formal structures and everyday practices. Despite their formal reliance on state-led planning, these systems have increasingly allowed market influences to shape development outcomes, particularly as urban growth pressures and private sector interests have grown stronger in recent decades.

The neo-performative systems cluster comprises the Netherlands, Lithuania, and Latvia. In these countries, general plans provide a broad framework for land use, but the actual allocation of development rights is negotiated in highly detailed plans. These negotiations typically involve close collaboration between public authorities, landowners, and developers. Such an approach reflects a planning culture that prioritises flexibility and responsiveness to market dynamics while still maintaining a degree of public control. The result is a more adaptive governance model that can accommodate development-led practices within the bounds of public policy objectives. In the Netherlands, for instance, negotiations ensure that spatial development aligns with broader public goals, even as market actors actively shape the details of projects. In Lithuania and Latvia, this neo-performative approach has emerged as a response to post-socialist transitions, combining new market pressures with inherited state frameworks.

The performative system is exemplified by the United Kingdom, where spatial governance is structured around discretionary decision-making rather than rigidly binding plans. In this model, the state manages urban development on a case-by-case basis, offering flexibility and negotiation space at the local level. While this performative approach can enable context-sensitive planning and adaptability, it can also create uncertainty for investors and developers. In the UK, successive reforms have retained the discretionary character of the system, with local authorities holding significant sway in development decisions.

However, this approach has also exposed the planning system to criticisms of excessive market influence, especially when broader social and environmental objectives are not robustly integrated into planning processes.

Collectively, these models reveal how SGPSs adapt to contemporary challenges, each reflecting a distinct balance of public control, market influence, and community participation in shaping urban futures, and this includes mobility planning tools, among which SUMPs are counted.

In the majority of JUST STREETS countries, i.e. Portugal (Braga), Romania (Cugir), Greece (Kozani), Latvia (Riga), and Lithuania (Vilnius), national authorities such as Ministries of Transport hold primary responsibility to define urban transport strategies, allocate funding infrastructure, and ensure compliance with international or EU-level commitments. Local authorities primarily serve as implementing agencies, with constrained autonomy and limited room for strategic innovation. Their roles are often confined to public service delivery, traffic control, and local roads and infrastructure maintenance. For instance, in Romania, the Ministry of Transport, Infrastructure, and Communication establishes the legal and procedural framework for mobility planning while requiring municipalities like Cugir to operate within a narrowly defined legislative framework (Framework Law no. 195/2006), by proving its conformance nature. A comparable dynamic is observed in Portugal, where the central government determines transport priorities while municipalities such as Braga manage urban services under strict administrative guidelines. These top-down highly centralised structure reflects the conformance nature of the Portuguese SGPS. Although this model ensures institutional coherence and streamlined vertical coordination, it often suppresses local flexibility and weakens the transformative potential of SUMP, particularly when plans are legally binding but procedurally rigid.

A particularly noteworthy case is Lithuania where the governance structure remains centralised with strong vertical coordination between national and local levels. Unlike other countries with established sub-national authorities, Lithuania lacks regional authorities that could facilitate coordination between central and municipal stakeholders. The absence of a regional authority hinders efforts to integrate spatial planning and mobility services across urban areas. The resulting meso-level governance gap undermines cross-jurisdictional alignment in the implementation of SUMP.

In contrast, the Netherlands demonstrates a decentralised governance system grounded in horizontal coordination among local and regional authorities. Subnational actors such as municipalities and provinces are empowered to lead transport planning, public infrastructure, mobility management, and implementation while the national government provides solely strategic roadmap, proving its neo-performative nature. Although the Dutch planning system is framed by national policy objectives, it is inherently non-binding and operationalised through informal institutional trust and inter-municipal cooperation.

Italy and England, despite having a conformance and performative system respectively, embody more complex multilevel governance systems that combine vertical coordination where national and regional authorities set overarching strategic goals with horizontal cooperation mechanisms that promote inter-municipal integration and adaptive implementation. The Metropolitan City of Milan is an example of institutionalised multilevel governance, where the metropolitan city ensures the alignment of the SUMP with national, regional and metropolitan mobility objectives. London, within a performative SGPS, is particularly symbolic of a hybrid governance model in which the Department of Transport sets overarching regulations, and the Transport for London (TfL) functions as both a strategic and operational authority. Local boroughs such as Westminster develop their own transport strategies aligned with TfL's London Plan. In these contexts, SUMP are formally binding, but their development often occurs through coordinated and flexible dialogues across levels.

Table 1 – Mobility planning structure in JUST STREETS countries/cities

Pilot cities	Authorities responsible for mobility planning
Amsterdam (NE)	National authority Ministry of Infrastructure and Water Management – in charge of national transport policy (roads, railways, aviation, maritime, inland water transport) Institute of Transport Policy Analysis – supports policymaking with data and knowledge at the Ministry of Infrastructure and Water Management ProRail – a government-owned private-law body, manages rail infrastructure and operations Dutch Railway – has the sole right to operate passenger services on the main railway network manages the train accessibility Regional authority Provinces - coordinate strategic transport planning, manage regional infrastructure (roads, railways, cycle paths) regulate public transport concessions oversee transport safety and logistics Local authority Municipalities – manage urban planning, local public transport, road and cycling infrastructure, parking management, and traffic regulation
Braga (PT)	National authority Ministry of Infrastructure and Housing – defines and implements national transport policies Ministry for the Environment and Energy Transition – oversees urban transport and suburban passenger service Ministry of the Sea – coordinates maritime affairs, manages ports and maritime transport, oversees national and EU funding related to the sea Ministry of Internal Affairs – develops road safety policy Infrastructure Portugal – state company responsible for design, maintenance, modernisation of road and national rail networks The Institute for Mobility and Transport – a central administration body, regulates and coordinates inland transport, and ensures quality standards for the protection of consumer's rights Bureau for the Prevention and Investigation of Aviation Accidents (GPIAA) - incident aviation investigation authority Regional authority Autonomous Regions of Azores and Madeira - manage regional infrastructure, including roads, ports, airports, and sea, air, and land transport, with full responsibility for regional mobility and logistics Local authority Municipalities – responsible for urban transport, local road networks, municipal aerodromes and heliports, school and touristic transport Intermunicipal entities – manage abovementioned functions under agreement with the municipalities Parishes – responsible for maintenance of shelters, signage, roads, and pavements.
Cugir (RO)	National authority Ministry of Transport, Infrastructure, and Communication – responsible for national legislative framework, strategy, infrastructure projects implementation, and international obligations coordinates scientific research and SMART CITY strategies Oversees state-owned transport companies and signs performance contracts with operators Manages EU alignment and national-level projects Regional authority Counties – shared powers with the central government (e.g., management of roads of county interest), legal basis: Article 26 of Framework Law no. 195/2006 (revised) Local authority Municipalities, towns, and communes – responsible for local roads and local public transport shared competences with national authorities in managing the road infrastructures of local interest at commune level, legal basis: Article 21 & 24 of Framework Law no. 195/2006 (revised)

Kozani (GR)	National authority Ministry of Infrastructure and Transport – develops national transport policy and legal framework, manages infrastructure projects at the national level, road safety
	Regional authority Extensive regulatory and licensing functions including licensing public transport vehicles, driving permits, new intercity and interregional bus services (KTEL), vocational training for transport managers, vessel licensing, fuel stations, taxi permits, and private roads coordinates inspections, safety rules, and environmental regulations for transport
	Local authority Municipalities – in charge of urban planning, traffic regulation, local roads and public spaces operate municipal public transport (particularly for social groups such as elderly, children, people with disabilities) Issue transport-related licenses (driving training, vehicle maintenance)
London – Westminster (UK)	National authority Department for Transport (DfT) – a ministerial department, provides national transport policy, regulates roads, rail, aviation, and maritime; funds local authorities; regulates vehicle safety and licensing; and oversees national investigations Other central agencies - Highways England (roads), Network Rail (rail infrastructure), Office of Rail and Road (regulator), British Transport Police, Maritime & Coastguard Agency
	Regional authority Devolved authorities (Scotland, Wales, Northern Ireland) control most aspects of transport in their regions. In United Kingdom, regional coordination is more fragmented, but Transport for London (TfL) plays a major role in strategic regional mobility planning and delivery across Greater London Strategic bodies coordinate some cross-border policies (e.g., North-South Ministerial Council with Ireland)
	Local authority Westminster City Council (a London borough) develops local transport strategies in line with TfL's London Plan Responsibilities include traffic management, local roads, parking, active travel infrastructure, and neighbourhood public transport. Local authorities across the UK differ in powers, but in London, local and regional coordination is strong and driven through TfL and the Mayor's office
Metropolitan City of Milan (IT)	National authority Ministry of Transport and Infrastructure – responsible for national transport systems (road, air) and water transport systems, traffic regulation, and major infrastructure Keeps current competences with regions over ports, airports, and strategic networks
	Regional authority In charge of regional public transport, maritime infrastructure, inland navigation, regional railways, inter-regional roads, and large-scale public works of regional interest
	Local authority Provinces – manage provincial transport, maintenance of provincial roads, and driving school licensing Metropolitan cities - ensure compatibility between urban mobility plans and local municipal plans Municipalities - manage local public and urban transport, traffic control, road maintenance, and land-use planning
Riga (LV)	National authority Ministry of Transport and Maritime Administration – develops national policy on transport and traffic oversees rail, maritime, inland water, and air transport systems Coordinates EU legal alignment and advocates Latvian interests Oversees the financial framework for inter-urban and regional public transport routes and unified ticketing systems Manages public-use railway infrastructure
	Regional authority Responsible for regional public transportation networks and financial oversight Proposes new or improved regional routes ensures coordination between local and national actors Oversees proper use of state and municipal transport budgets
	Local authority manages urban public transport planning and service delivery maintains bus stops and related infrastructure, and coordinates with regional authorities Responsible for maintenance and lighting of local roads, streets, and public squares
Vilnius (LT)	National authority Ministry of Transport and communication – Development and implementation of national transport policy, coordinate logistics, manages infrastructure for all transport modes (road, rail, sea, air, inland waterways) Oversees state-owned ports and airports, and develops national strategies including transit and combined transport
	Regional authority -----
	Local authority Local governments manage planning and maintenance of local roads, traffic safety, local route licensing, and compensation mechanisms for socially inclusive transport (e.g., rural school transportation)

Table 2 – The tools for mobility planning in JUST STREETS cities

Pilot Cities	Mobility planning tools - SUMPs
Amsterdam (NE) 2013	Title: Mobility Approach Amsterdam 2030 Objective(s): Prioritising cost-efficient and space-saving modes of transport while optimizing the use of available infrastructure
Braga (PT) 2019	Title: Sustainable Urban Mobility Plan for the City of Braga Objective(s): Promote soft modes (pedestrian, cycling), improve public transport, reduce car use, and support intermodality
Cugir (RO) 2023	Title: Sustainable Urban Mobility Plan, 2022-2030 (PMUD) Objective: Provide an efficient and sustainable transport system to ensure accessible, safe, and sustainable transport to all in urban/periurban areas
Kozani (GR) 2020	Title: Sustainable Urban Mobility Plan (SUMP) of the Municipality of Kozani (PMUD) Objective(s): Develop a sustainable, inclusive mobility system by shifting from car use to active/shared modes, improving quality of life, and integrating smart technologies
London – Westminster (UK) 2017/2014	Title: Walking strategy - Cycling strategy Objective(s): Make Westminster a national leader in walking and cycling by improving safety, accessibility, and uptake of active travel modes
Metropolitan City of Milan (IT) 2021	Title: Sustainable Urban Mobility Plan (SUMP) of the Metro city of Milan Objective(s): Satisfy the demand for mobility in urban and metropolitan areas
Riga (LV) 2020	Title: Towards a better everyday life Riga mobility vision Objective(s): To create a sustainable, inclusive, people-centered mobility system that promotes equality of life, urban livability, public health, while addressing environmental and economic challenges
Vilnius (LT) 2018	Title: Vilnius city sustainable mobility plan – action plan (SUMP) Objective(s): To create clean, safe, inclusive, and sustainable urban mobility systems, enhance quality of life, a modal shift from walking and cycling and support climate neutrality initiative

4. Multilevel planning in action: the Metropolitan City of Milan - City of Corsico case study

The Metropolitan City of Milan (CMM) is the second most populous metropolitan area in Italy (after Rome), encompassing 133 municipalities and over 3 million inhabitants. CMM was formally established in 2015 through the Delrio Law (Law No.56/2014), which reformed local government in Italy and instituted 14 “città metropolitane” in the country’s largest metropolitan areas, in substitution of the respective provincial governments (Casavola et al. 2024). Metropolitan cities are responsible of three key planning instruments: the metropolitan strategic plan (PSM), the metropolitan general spatial plan (PTGM) and the sustainable urban mobility plan (PUMS). In more detail, they inherited the competences of the former provincial governments they substituted, and additional functions, such as strategic, spatial and mobility planning, organisation of coordinated systems for the management of public services, mobility and transport, promotion and coordination of digitalisation and economic and social development. While the PSM and the PUMS are non-binding strategic planning tools, the PTGM is a binding spatial planning tool. In essence, the PTGM assumes binding functions for land-use and urban planning, regulating the activities of municipalities regarding infrastructure and services under metropolitan jurisdiction, as well as land consumption. However, effective control over municipal land in the municipalities that are part of the metropolitan city is up to the municipalities themselves, through their land-use plan, a planning and land-use regulation tool that has no predefined time frame. As a result, the adjustment of municipal plans to what the metropolitan plan establishes depends on the willingness of municipalities to issue a new plan or a variant to it. In addition, it should be considered that Italian metropolitan cities are second-tier public bodies, that is, not directly elected. This results in weak political representation on the ground.

Within the metropolitan city, the municipality of Corsico emerges as a densely populated suburban municipality, located in the first belt, approximately 7 kilometres southwest of the city centre of Milan, with a resident population of around 34,000. Corsico is highly integrated into the metropolitan transportation and economic systems. It functions as part of the daily commuter belt and benefits both urban and regional public transport services.

This case study is analytically significant for two key reasons. Firstly, it demonstrates the dynamic between metropolitan-level strategies such as SUMP and institutional capacities, political priorities, and operational constraints at the municipal level. Secondly, the Corsico pilot city provides a valuable lens to examine the mechanisms of multilevel governance in translating metropolitan strategies into localised implementation. This is particularly pertinent in suburban contexts, where disparities in urban density, socioeconomic context, political leadership, and administrative capacity among municipalities pose distinct challenges for coherent policy implementation.

The metropolitan city of Milan shows significant interest in active and sustainable mobility. Active mobility is treated as a strategic priority and deeply embedded with broader goals of environmental efficiency and modal shift. In particular, the SUMP of Metropolitan city of Milan supports its low-impact mobility strategy through the development of comprehensive cycling network via its dedicated Biciplan (Metropolitan Plan for Cycling Mobility), alongside safety improvements for pedestrian around key nodes particularly around schools, transit hubs, and public institutions. In doing so, the metropolitan city aims to support people in rethinking their mobility choices towards more sustainable forms, through both home-city centre connections and the strengthening of interchange functions between all transport networks. This change in behaviour is the main challenge of the Metropolitan City of Milan, especially in places where the concentration of people, mobility and functions is greater, such as in station areas, intended as modal interchanges centres.

As regards transit hubs, the metropolitan SUMP and the PTGM, approved almost simultaneously in April and May 2021 respectively, present a common vision and consistent indications with respect to the territorial role of the stations and the areas surrounding them. They identify, at the stops of the Milanese suburban railway lines and the other main modal interchange nodes, the so-called Luoghi Urbani della Mobilità - Urban Places for Mobility (LUM). LUMs are areas around the main public transport interchange stops within which, in view of their high accessibility, the location and strengthening of services and infrastructures necessary to enhance the interchange function and urban functions and services to people and businesses, aimed at improving the safety and liveability of the area, should be promoted. They provide for the regeneration and settlement of urban functions and services to people and businesses, as well as services and infrastructures necessary for the interchange function.

This coherence between metropolitan planning tools concerning settlement development and mobility creates fertile ground for TOD-oriented development and to promote more active and sustainable mobility. Although it may appear to be a reasonable coordination and present in all Italian metropolitan cities, the case of Milan is among the few to operate this synergy in Italy (Staricco and Vitale Brovarone, 2021, 2023).

As part of the JUST STREETS Project, the Metropolitan City of Milan intends to experiment by bringing the action of the metropolitan level closer to that of the municipal level, through a process of co-definition of guidelines and regulations for the development of LUMs. In this respect, the Corsico LUM would be considered as a pilot to experiment innovative multilevel planning practices. The guidelines for the organisation of inclusive and sustainable accessibility of the interchange nodes are then meant to be replicable in other mobility nodes in the territory of the Metropolitan City of Milan. They are also inspired by what has already been provided for and indicated in the planning tools of the metropolitan city. This initiative intends on the one hand to scale down the planning practices of the metropolitan authority, on the other hand to scale up local practices and instances, in particular with regard to the actions carried out by grassroots associations. The latter are the subject of investigation through interviews and focus groups, and will be involved in the process of co-creation of the guidelines. In this way it will be possible to integrate the perceptions and needs of the community, integrating them with the analysis of the territory and the regulatory framework through a process of listening and active involvement never before experienced by the metropolitan city in its planning tools.

Bringing the lens closer to the municipal level, the municipality of Corsico, although not formally involved in the partnership of the Just Streets project, has shown interest in the project and intends to cooperate in the co-definition of the guidelines for the development of the LUM. The LUM of Corsico poses particular challenges regarding accessibility and active mobility, being a minor suburban station in a car-oriented context, worsened by the presence, near the station, of two industries that provide for the continuous passage of heavy vehicles along a narrow road used by pedestrians and cyclists. This is therefore, in theory, an optimal opportunity to experiment with multilevel and multi-actor governance, involving different types of actors (public administrations, public transport operators, research centres, third sector associations) operating at different administrative levels (metropolitan city, municipality), in different sectors (urban and mobility planning, local development, advocacy of marginalised social groups) to improve mobility justice.

However, at the time of writing this paper, we cannot go further in the analysis, as the co-planning process, however promising, has been for several months breathed into institutional quibbles related to the signing of a formal collaboration agreement between the metropolitan city and the municipality, without which the metropolitan city is not authorised to carry out any initiative (not even intangible) within the municipality.

This suggests the challenges posed by a multi-level governance process of this type and, more generally, how much traditional metropolitan planning tools, including SUMP, are able to catalyse and implement transformative mobility practices.

5. Discussion: lessons learnt from Corsico and the Metropolitan City of Milan

The governance structure and institutional dynamics observed in the Corsico case reveal critical insights into the transformative potential of SUMP. While SUMP are intended as strategic tools for sustainable mobility, their real impact is heavily influenced by the multilevel governance arrangements in which they are embedded. A key challenge emerging from the Milan-Corsico case is the persistent asymmetry between metropolitan and local governance levels. Although the Metropolitan City of Milan's SUMP and related plans like the PTGM and Biciplan offer robust visions for sustainable mobility, municipalities such as Corsico often lack the institutional and financial capacity to align local practices with these metropolitan objectives. The non-binding nature of strategic plans like SUMP, and the limited power of the metropolitan institution in implementing its plans at the municipal level, further complicates this dynamic, as it leaves room for local resistance or inaction, especially in municipalities with limited resources or conflicting priorities. This reinforces the observation that transformative mobility practices require not just visionary plans but also capacity-building mechanisms and funding streams that support local adaptation.

The Italian SGPS combines flexibility in municipal land-use planning with rigid binding frameworks at the metropolitan and regional levels. While this duality theoretically allows for local responsiveness, in practice, it

can produce institutional deadlock. In Corsico, the potential for active mobility improvements is constrained by the absence of a formal collaboration agreement, which delays project implementation and underscores the importance of procedural flexibility and trust-building in multilevel governance. This suggests that rigid legal frameworks (though essential for ensuring consistency) can inadvertently stifle local initiatives if not balanced with procedural flexibility and shared governance practices.

The case of Metropolitan City of Milan-Corsico in the JUST STREETS project highlights both the promise and the pitfalls of participatory co-production processes in mobility planning. The engagement of grassroots organisations and civil society actors through co-creation of LUM guidelines offers a powerful example of how SUMP can catalyse more inclusive and context-sensitive mobility practices. However, the institutional inertia that has stalled formal cooperation also demonstrates that genuine co-production cannot be an afterthought; it must be embedded and institutionalised within planning processes and supported by governance structures that facilitate rather than hinder local experimentation.

The Corsico pilot also sheds light on the justice dimensions of mobility transitions. While the metropolitan SUMP framework prioritises active and low-carbon mobility, the challenges faced by Corsico, such as heavy vehicle traffic along narrow, pedestrian-inhabited corridors, underscore the need to address not just climate goals but also social equity and accessibility. Integrating community voices and ensuring that plans are sensitive to the everyday realities of disadvantaged or marginalised groups are essential steps towards realising mobility justice. Ultimately, the Corsico experience underscores that SUMP's transformative potential depends on navigating the tensions between metropolitan strategies and municipal implementation, between binding legal structures and local adaptation, and between formal governance frameworks and community-driven practices. Future research should explore how these dynamics play out across other municipalities and how inclusive, flexible governance models can be strengthened to turn visionary plans into transformative, justice-centred urban mobility systems.

6. Conclusion and avenues for future research

The Corsico-Metropolitan City of Milan pilot underscores the complex interplay between SGPS and the transformative potential of Sustainable Urban Mobility Plans (SUMP). While the multilevel governance structures in Milan-Corsico showcase innovative visions for active and sustainable mobility, they also reveal how rigid frameworks, capacity asymmetries, and fragmented implementation can undermine these ambitions. At the same time, the co-creation process involving local actors and communities hints at a promising pathway towards more inclusive and justice-oriented urban mobility transformations.

Future research could delve deeper into these critical tensions by explicitly integrating the conceptual framework of SGPS and the mobility justice lens. While SGPS literature has largely focused on how legal structures, planning tools, and institutional arrangements shape spatial development, it often falls short of interrogating how these systems interact with social inequalities and justice concerns. Conversely, mobility justice scholarship foregrounds questions of equity and inclusion but may not always fully engage with the institutional and procedural underpinnings of spatial governance.

Bridging these two domains could open fertile ground for understanding not only how SUMP are developed and implemented, but also whose interests they serve and whose voices are excluded in the process. For instance, future studies could explore how the procedural dimensions of SGPS, such as participatory mechanisms, co-production of knowledge, and local negotiation, affect the realisation of mobility justice goals like equitable access, environmental sustainability, and recognition of diverse mobility needs. Comparative research across different metropolitan and municipal contexts could also help identify best practices and structural barriers in reconciling top-down planning with bottom-up initiatives.

Another promising direction involves examining the performative role of discourses within SGPS, i.e. how narratives around "smart" or "sustainable" mobility either enable or constrain justice-oriented planning. This could include analyses of how discursive frames shape priorities within SUMP and how these narratives are contested or reinterpreted by marginalised groups. Embedding this focus within SGPS research would offer richer insights into how mobility justice can be more than an add-on goal, becoming an integral part of planning systems and governance structures.

Finally, the Corsico–Metropolitan City of Milan case study suggests that multilevel governance arrangements are not inherently good or bad for mobility justice; rather, their transformative potential depends on how they are activated through inclusive processes, shared visions, and flexible institutional frameworks. Unpacking these relational dynamics across SGPS components (structures, tools, practices, and discourses) can reveal pathways for fostering more equitable and resilient urban mobility futures.

Acknowledgments

The research that gave rise to this paper was developed within the Horizon Europe JUST STREETS project. JUST STREETS is funded by the European Union's Horizon Europe programme under grant agreement No 101104240. Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or the European Commission.

References

- Albrechts, L. (2017) 'Strategic Planning as a Catalyst for Transformative Practices', in Encounters in Planning Thought. Routledge.
- Berisha, E., Cotella, G., Janin Rivolin, U. and Solly, A., 2021. Spatial governance and planning systems in the public control of spatial development: a European typology. *European planning studies*, 29(1), pp.181-200.
- Casavola, D., Cotella, G. and Vitale Brovarone, E., 2024. Engaging small towns in metropolitan governance: evidence from Italy. *European Journal of Spatial Development*, 21(3).
- European Commission (2019) Guidelines for developing and implementing a sustainable urban mobility plan: second edition. [Online] Available at: https://urban-mobilityobservatory.transport.ec.europa.eu/system/files/202309/sump_guidelines_2019_second%20edition.pdf
- European Commission (2023) National Support Programmes for Sustainable Urban Mobility Planning (32023H0550). [Online] available at: <https://eur-lex.europa.eu/eli/reco/2023/550/oj/eng>
- Hidayati, I. and Tan, W., 2025. Assessing justice in sustainable mobility transitions: narratives from transport policies in Jakarta. *Journal of Environmental Policy & Planning*, pp.1-13.
- Jordová, R. and Brůhová-Foltýnová, H., 2021. Rise of a new sustainable urban mobility planning paradigm in local governance: Does the SUMP make a difference?. *Sustainability*, 13(11), p.5950.
- Maltese, I., Gatta, V. and Marcucci, E., 2021. Active travel in sustainable urban mobility plans. An Italian overview. *Research in Transportation Business & Management*, 40, p.100621.
- Schwanen, T., 2021. Achieving just transitions to low-carbon urban mobility. *Nature Energy*, 6(7), pp.685-687.
- Staricco, L. and Vitale Brovarone, E., 2021. Tod e pianificazione metropolitana: per un'agenda di ricerca. *Territorio*, 99, 4, 2021, pp.17-24.
- Staricco, L. and Vitale Brovarone, E., 2023. Il modello TOD e la sua trasferibilità al contesto italiano: il contributo delle città metropolitane. In *Ottavo Rapporto sulle città. Mobilità & Città: verso una post-car city* (pp. 47-56). Il Mulino.
- SUMPS-UP (2018) European Programme for Accelerating the Take-up of Sustainable Urban Mobility Plans. [Online] Available at: https://sumps-up.eu/fileadmin/user_upload/Tools_and_Resources/Reports/SUMPs_Up_D5.1_SUMP_in_Member_States_report_28022018_final_doc_with_annexes.pdf
- Wågsæther, K., Remme, D., Haarstad, H. and Sareen, S., 2022. The justice pitfalls of a sustainable transport transition. *Environment and Planning F*, 1(2-4), pp.187-206.