Driving Urban Transitions

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MAIN CODE

urban climate shelters in schoolyards

Report D2.1

Comprehensive stakeholder map in Turin and Halandri

WP 2 | Co-Design Future Workshops
Task 2.1 | Map the key stakeholders in Turin and Halandri

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Comprehensive stakeholder map in Turin and Halandri

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1. Introduction: What is this Document About

WP2, led by ULAB and co-led by COMMONSPACE, revolves around the development of **six Future Workshops** based on the involvement of key stakeholders in Turin and Halandri that will be engaged in co-designing UCS in the pilot schoolyards. **Task 2.1** – Map the key stakeholders in Turin and Halandri - will provide the map of the **Turin and Halandri institutional and non-institutional stakeholders who will be the key players in the co-design phase**, thanks to desktop and on-field research. Analysis through different visual tools will help understanding both cities in terms of social composition. Task 2.1 is led by ULAB, with COMMONSPACE ensuring ongoing feedback and alignment, both in terms of the stakeholder mapping and the planning of subsequent tasks within the Work Package.

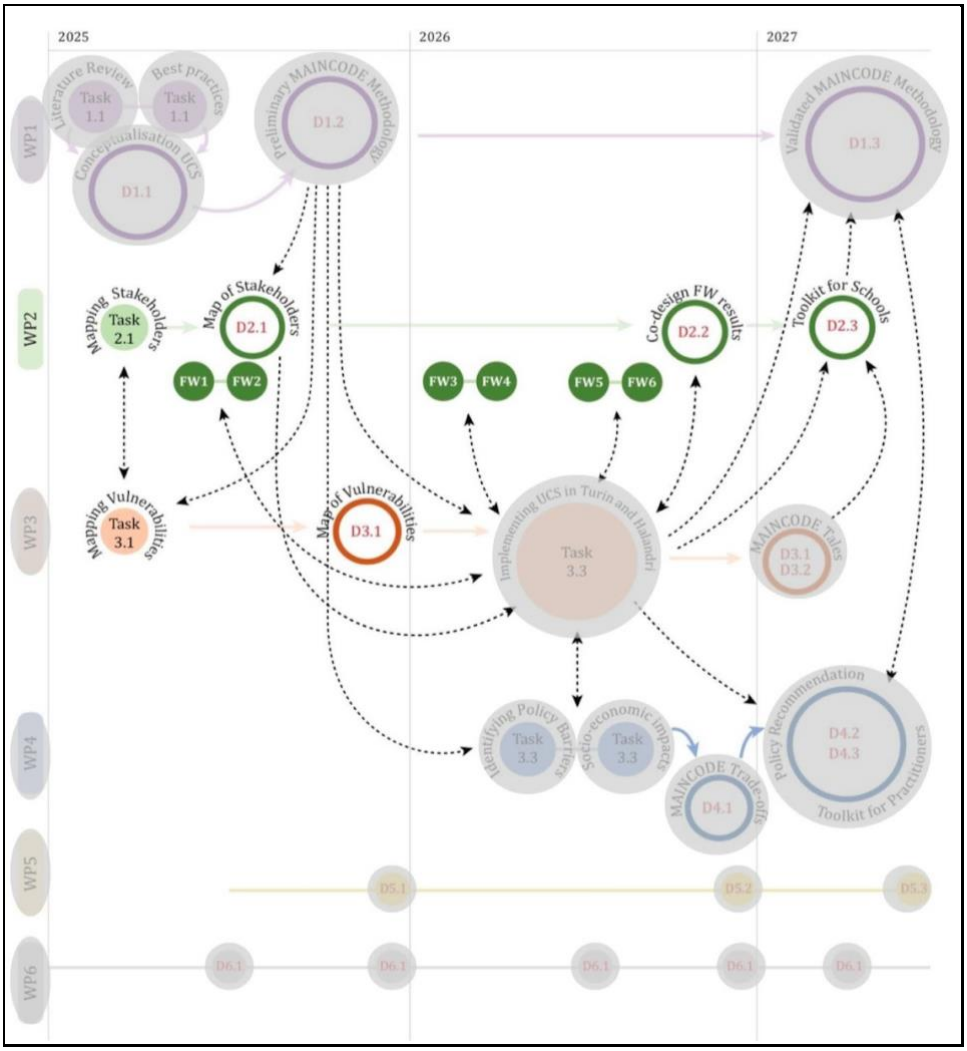


Figure 1 | Task 2.1 in relation with WPs (Source: MAINCODE proposal)

In this Report, **Turin and Halandri describe the process of selecting the shortlist of potential schools where the climate shelter will be co-produced in 2026 as the main MAINCODE expected result**. To do so, the investigative and analytical efforts of social actors and stakeholders are presented through various tools - both textual and visual.

2. Methodology for Stakeholder Mapping

Stakeholder mapping, in the context of climate resilience, is a crucial step toward understanding the dynamics, responsibilities and opportunities for action within school environments. In both Turin and Halandri, the **focus is placed on school areas that are particularly vulnerable to the impacts of climate change**. These are spaces characterized by limited shade, high surface temperatures due to excessive asphalt and concrete, and a lack of Nature-based Solutions (NbS), such as trees, green spaces, and permeable surfaces. The **methodological approach to stakeholder mapping is context-sensitive**, considering the urban scale, as well as the unique socio-spatial characteristics of each city. As a result, distinct pathways and tools have been adopted for Turin and Halandri, which will be detailed in the respective city-specific sections that follow.

2.1 Link to the vulnerability map (D 3.1)

This mapping process aims to identify and engage the key actors - both institutional and non-institutional - who influence, manage or are directly affected by the condition and transformation of schoolyards and their surroundings. By doing so, we seek to support more inclusive, effective, and sustainable interventions that enhance the environmental quality and climate resilience of these critical community spaces.

To focus the analysis and enable targeted action, a **shortlist of schools located in different neighborhoods of Turin and Halandri has been identified**. This selection process was guided primarily by the level of climate-related vulnerability observed in each school area - specifically, the presence of heat islands, limited tree coverage and shading, excessive asphalt surfaces, and a general lack of Nature-based Solutions (NbS). The aim was to highlight sites where socio-economic and climate conditions are most critical, and where intervention could bring the greatest impact in terms of resilience and quality of life.

The identification of these schools was informed by the **broader socio-economic and climate vulnerability map carried out within the Task 3.1 (D 3.1).** This mapping effort provided a data-driven basis for understanding which areas of Turin and Halandri are more exposed to climate stressors such as extreme heat, including specific school zones. From this initial shortlist of schools, **one school will be selected as the pilot site for further in-depth analysis and co-design of the Urban Climate Shelter intervention**. Along with a set of local stakeholders, the shortlisted schools will be presented in detail in the following sections, serving as a reference point for future actions and for replicability across the city.

2.2 Sources, methods and identification criteria

To ensure a comprehensive and context-sensitive stakeholder mapping, the identification and analysis of relevant actors were guided by a **multi-source and mixed-methods approach** that combined both qualitative and quantitative data. This approach integrated insights from document reviews, site observations, institutional directories, and community consultations, allowing for the triangulation of information across formal and informal sources.

A range of stakeholder mapping tools and frameworks were employed to structure the analysis. Turin and Halandri have decided to apply different tools based on the best available resources. Among those are: (i) **network diagrams** to visualize interdependencies and relational proximity among actors; (ii) **spatial mapping** to locate stakeholders in relation to key sites, such as schoolyards and public infrastructure; (iii) **influence–interest matrices** to assess relative power and engagement potential; and (iv) **SWOT** (Strengths, Weaknesses, Opportunities, Threats) and **PESTLE** (Political, Economic, Social, Technological, Legal, Environmental) analyses were also used to explore broader contextual factors shaping not merely stakeholder roles, but neighbourhoods contextual factors. This **layered methodology** enabled the identification not only of institutional stakeholders — such as schools, municipal departments, and service providers — but also of less visible yet equally critical grassroots actors, including parent groups, informal networks, and local civic organizations. By combining these analytical tools, the mapping process aimed to capture the complexity of the local ecosystem and provide a solid foundation for inclusive engagement and strategic decision-making throughout the project. The identification of stakeholders through this diverse set of sources and analytical frameworks leads to their classification based on roles, levels of influence, interests, and engagement potential. This classification serves as a **foundational step for shaping the next phases of MAINCODE, particularly the participatory co-design and structured dialogue processes for the development of the climate shelter.** By distinguishing between different types of actors (institutional partners, end users, influencers, and potential supporters) the project team can tailor engagement strategies that are inclusive, targeted, and context-aware. This approach ensures that the voices of both formal decision-makers and grassroots community members are adequately represented, and that the design of the climate shelter is grounded in a shared understanding of local priorities, capacities, and constraints. Ultimately, the stakeholder classification serves as **a strategic link between the initial mapping phase and the collaborative design activities that follow**.

3. Stakeholder Identification and Analysis

3.1 Turin

In Turin, **District 6 emerged as a priority zone** due to the combination of socio-economic and climate vulnerability. Within this district, particular attention has been given to the **neighborhoods of Barriera di Milano and Regio Parco**. Both neighborhoods have a long history and are located approximately 1.5 to 3.5 km north of the historic city center. Historically, they developed as proletarian and working-class areas. Nowadays, these portions Turin are characterized by a **high concentration of impermeable surfaces, limited urban greenery, and pronounced urban heat island effects** - conditions that significantly heighten their exposure to climate-related risks. In addition to these environmental concerns, both neighborhoods also face **socio-economic challenges** that further exacerbate their vulnerability and underscore the need for inclusive and context-sensitive

adaptation strategies. In a nutshell, these neighborhoods not only represent critical hotspots from an environmental standpoint, but also offer valuable opportunities to pilot innovative, community-centered approaches to climate resilience - particularly in and around school areas that serve as vital public spaces for children and families. Figure 2 is an excerpt from the Turin Vulnerability Map (D3.1). It shows how **the two neighborhoods suffer from significant socio-economic and climatic conditions**. The area above the Stura River, also highlighted in red, has a significantly lower population density and a presence of cultivated fields that makes it less preferable than the selected neighborhoods.

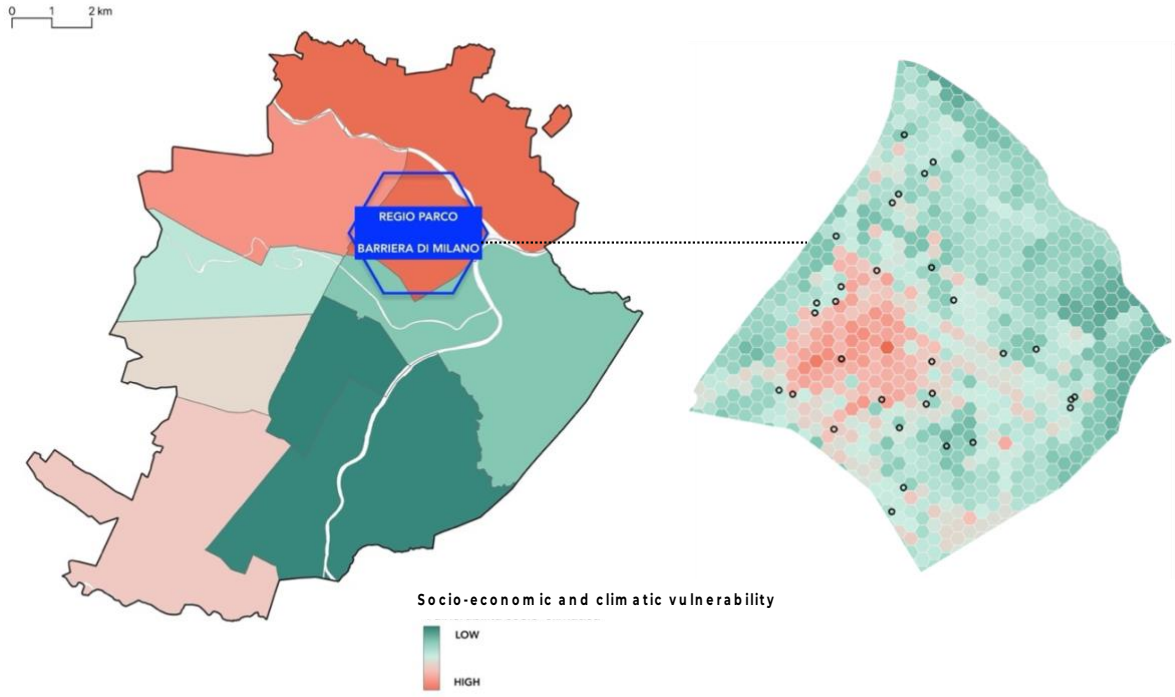


Figure 2 | Vulnerability map insights (Source: MAINCODE D3.1)

3.1.1 Sources and visual stakeholder tools

The stakeholder selection process was based on the integration of qualitative and spatial methods, articulated through the following actions:

- **Institutional websites and geographic tools:** systematic exploration of websites, directories, and social media platforms of local associations, services, and informal groups enabled a first level of mapping. This step helped surface both established and emerging actors who may not appear in formal institutional lists. The *Comune di Torino* website provided official documentation, updated lists of active services, urban planning documents, and local governance structures. The *Scuola in Chiaro* website Moreover, the *Geografie Metropolitane* website tool has allowed us to better understand the social, cultural and green fabric of the area, supporting a

refined comprehension of territorial boundaries, local assets, services and risk factors.

- **European and local projects, and field research:** existing European-funded projects operating in the area - especially those focusing on urban regeneration, social inclusion, and participatory governance - were analysed. Project reports, stakeholder lists and evaluations served as indirect mappings of the local ecosystem. Some of those projects were already carried on by Urban Lab itself, providing valuable insights into historical layers of stakeholder engagement (Lab Park[1], Infrablue[2], Voci di Quartiere[3] projects).
- **Field visits and observations:** site visits were carried out across different parts of Barriera di Milano and Regio Parco. These explorations allowed for the direct observation of community spaces, informal gathering places, and territorial markers relevant to local dynamics. Additionally, these visits provided a preliminary validation of desk-based findings.
- **Dialogue with local actors:** informal conversations and semi-structured interactions with social actors from previous analysis (including association members, local leaders, volunteers, and residents) played a key role. These dialogues not only helped identify additional stakeholders but also provided a richer understanding of the relationships, conflicts, and collaborations shaping the territory.

This section presents different visual tools that will help the reader to understand the **distribution of stakeholder and urban services in the neighbourhoods considered**. The following diagram visualises interdependencies and relational proximity among actors and main partner of Urban Lab in the MAINCODE Project. In order to visually represent the socio-cultural nature of these neighbourhoods, the following maps show the distribution of a **mixture of cultural and green elements**. For both maps, the layer list comprehends theatres, libraries, museums, cinemas, places of worship, sports facilities, neighbourhood houses, schools, educational services (0-2 age), hospitals, family counselling, clinics, lakes, rivers and urban greenery in Turin. The main idea under this representation is to think of green and blue infrastructures at the level of other services. In this sense, **Urban Climate Shelter solution can act as an element of enhancement to the existing and as a connector of urban services**. In the following maps, it is possible to better understand the relation among services and greenery in Regio Parco and Barriera di Milano. **By strategically integrating with cultural, social, and environmental infrastructures, climate shelter not only improves local microclimates but also fosters stronger community interactions and accessibility**. Its design aims to create multifunctional spaces that respond to both ecological needs—such as reducing heat islands and increasing green cover—and social needs, by serving as gathering points for educational activities, social services, and neighbourhood events.

[1] https://full.polito.it/research/lab-park-nuovo-scenario-per-il-parco-dellarrivore/
[2] https://urbanlabtorino.it/projects/infrablue/?lang=en
[3] https://urbanlabtorino.it/iniziative/voci-di-quartiere-2025/

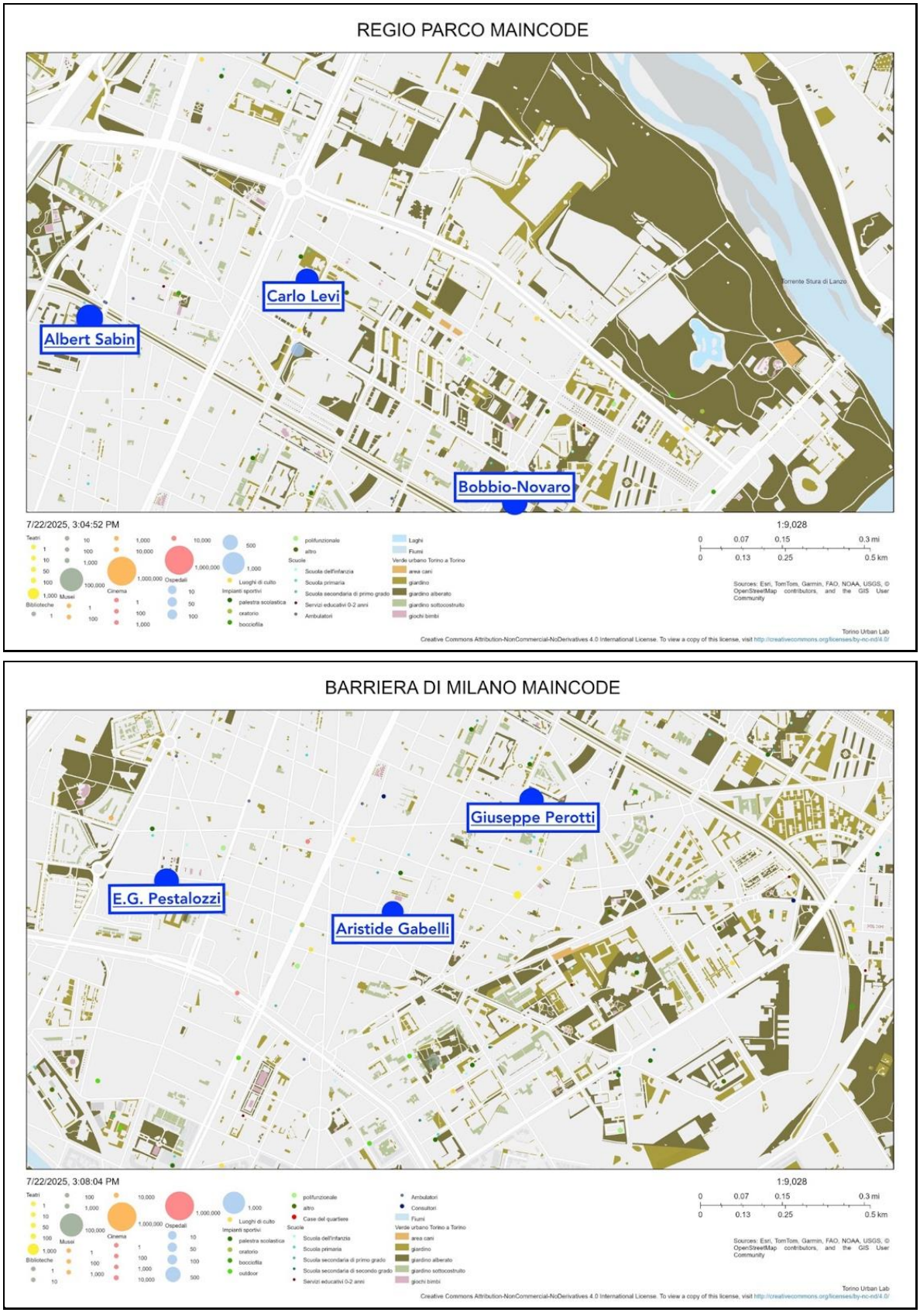


Figure 3 | Regio Parco and Barriera di Milano schools, urban services and greenery (Source: Authors elaborations)

What emerges from the representations is a **fragmented territory**: the presence of parks does not guarantee the enjoyment of greenery, as there are no nearby services for people. On the other hand, the more built-up area of Barriera di Milano, despite offering a greater number of activities, is defined only at its edges by greenery services.
Both districts share several key socio-economic characteristics. They are working-class neighborhoods, historically shaped by waves of industrialization and, more recently, by demographic transformations linked to migration. A significant proportion of residents are **low- to middle-income workers**, and both areas are home to a high percentage of **foreign-born residents and second-generation youth**. These socio-demographic patterns correlate strongly with higher levels of vulnerability to climate change impacts, particularly heatwaves, which tend to disproportionately affect densely populated and economically disadvantaged urban areas. In terms of public services, both neighborhoods have a network of educational institutions, including preschools, primary and lower secondary schools. **These schools often function as vital community anchors,** especially where access to extracurricular, cultural, and private services is limited. The availability of sports facilities is uneven and infrastructure services are frequently outdated or insufficient. Access to public healthcare services is similarly constrained, and linguistic, administrative, or economic barriers can make it difficult for some families - especially migrants or single parents - to receive adequate care. The situation about green spaces differs subtly between the two neighborhoods. Barriera di Milano, with its dense, compact urban fabric, has **limited and often fragmented green areas, many of which lack sufficient tree cover or amenities**. Regio Parco, while also urban and built-up, benefits from its proximity to the Stura river and adjacent green corridors. However, even here, **access to quality greenery is not evenly distributed, and microclimatic conditions around schools vary significantly**. Given this context, the selection of a pilot schoolyard for climate adaptation needs to consider strategic conditions. In both neighborhoods, a redesigned, Nature-based schoolyard could serve as a cooling shelter not only for students, but also for caregivers, teachers, and nearby residents, especially during summer. Choosing a site in Barriera di Milano might maximize impact in an area with scarce greenery and high population density, while selecting a location in Regio Parco could strengthen connections to existing ecological corridors and amplify their effects within a school-centered network of green infrastructure.
In both cases, the rationale goes beyond physical space. The transformation of a schoolyard into a climate shelter must be guided by criteria of **social justice**, ensuring that investments in green infrastructure address the needs of those most exposed and least equipped to adapt. In neighborhoods like Barriera di Milano and Regio Parco, where economic vulnerability, cultural diversity, and climate risk converge, the schoolyard becomes a symbolic and functional space. In the long term, **MAINCODE goal is to aim at a neighborhood-scale intervention with the potential for systemic impact at the city scale.**

3.1.2 Stakeholder identification, classification and analysis

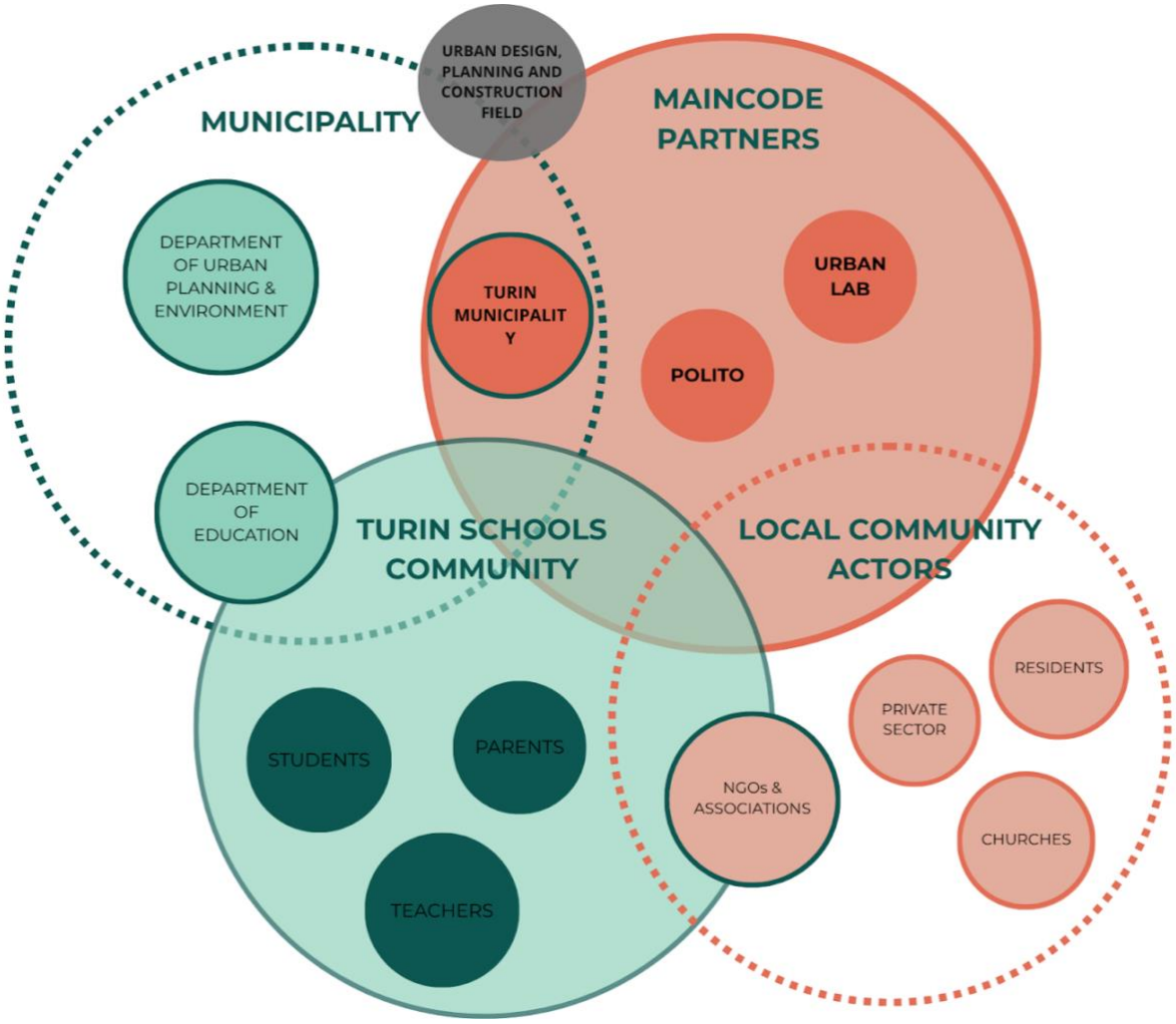


Figure 4 | Diagram of stakeholder relation in Turin (Source: Authors elaborations)

Figure 4 shows a **representation of the relationships of interest and interdependence among the macro-groups of Turin stakeholders involved in MAINCODE.** As can be seen, a relationship of strength and relevance is provided by those actors positioned across multiple groups: the municipality, the Department of Educational Services, and the associations present in the area of interest. On the other hand, the "Turin school community" represents the core of the project. Its greatest relevance, however, lies in the steps that will follow the macro-analysis of stakeholders conducted within this document. The selection of the school community(ies) will lead to further investigations regarding the group covered. Additionally, Table 1 shows the **list of stakeholders that have emerged as relevant in the area of interest**. This includes the shortlist of schools selected so far. In litght green, the schools' facilities.

Organisation	Type	Address
Comprehensive Institute "Ennio Morricone" Primary School Albert Sabin	School	Corso Vercelli, 157 - 10156 Torino
Comprehensive Institute "Bobbio - Novaro" Primary School Bobbio-Novaro Primary School Carlo Levi	School	Via Santhià, 76 - 10154 Torino Via Monte Rosa, 165 - Torino
Comprehensive Institute "Ilaria Alpi" Primary School Giuseppe Perotti	School	Via Mercadante, 68,8 - 10154 Torino
Comprehensive Institute "Aristide Gabelli" Primary School Aristide Gabelli Primary School Giovanni Enrico Pestalozzi	School	Via Santhià, 25 - 10154 Torino Via Banfo, 32 - 10155 Torino
Students' parent groups	Informal group	*Same as schools' locations*
Iqbal Masih Municipal Preschool	Preschool	Via Ancina 29, 10154 - Torino
"Guizzino" Municipal Nursery School	Preschool	Corso Taranto 170, 10154 – Torino
Scuole Tecniche "San Carlo"	Public Institution	Via G. Pergolesi 119 - 10154 Torino
Parish "Resurrezione del Signore"	Church	Via Monte Rosa, 150 -10154 Torino
Summer camp Resu - NOI Risurrezione del Signore	Church	Via Monte Rosa, 150 -10154 Torino
Salesian oratory "Michele Rua"	Church	Via Paisiello, 37 - 10154 Torino
"Variante Bunker" Association	NGO/Foundation	Via Niccolò Paganini, 0/200 -10154 Torino
"Giorgio Amendola" foundation	NGO/Foundation	Via Tollegno, 52 - 10154 Torino
"Mamre" foundation	NGO/Foundation	Piazzale Croce Rossa Italiana 185/A – 10154 Torino
"ACMOS" association	NGO/Foundation	Via Ruggero Leoncavallo, 27 -10154 Torino
Football School "Mercadante"	Sport	Via Saverio Mercadante, 133 - 10154 Torino
"Allotreb" sport association	Sport	Via Riccardo Zandonai, 18 -10154 Torino
COOP supermarket	Private Coop	Via Sandro Botticelli, 26d -10154 Torino
Hospital "San Giovanni Bosco"	Public Institution	Piazza del Donatore di Sangue, 3 - 10154 Torino
Mediaworld	Private	Corso Giulio Cesare, 202/210 - 10154 Torino
Co.Mu.Net - Officine Corsare	NGO/Foundation	Via Poggio, 16 - 10155 Torino
Market of via Porpora	Economic Coop	Via Nicola Porpora – 10154 Torino
Market of Piazza Crispi	Economic Coop	Piazza F. Crispi – 10155 Torino
Intercultural Centre of Turin	Public Institution	Corso Taranto, 160 - 10154 Torino
Rete ONG association	NGO/Foundation	Via Norberto Rosa, 13/a 10145 Torino
Mosque "Dar Al Imaan" (inside LIDL via Botticelli)	Church	Via Sandro Botticelli, 59/B - 10154 Torino
"Unicorno Style" association	Sport	Corso Taranto, 104/B - Torino

"Arte Sport" association	Sport	Via Monte Rosa, 195 - 10154 Torino
"Progetto SLIP" association	Art/Sport	Corso Giulio Cesare, 338/50d - 10154 Torino
"Bagni Pubblici di via Agliè" neighbourhood house	NGO/Foundation	Via Agliè, 9, 10154 Torino
"Via Baltea" community Hub	NGO/Foundation	Via Baltea, 3, 10154 Torino
Open Incet	Public institution	Piazza Teresa Noce, 17 - 10155 Torino
Giacomo Brodolini Foundation	NGO/Foundation	Piazza Teresa Noce, 17 - 10155 Torino
District 6 - Environment	Public institution	Via S. Benigno, 22 - 10154 Torino
Civic Library "Cascina Marchesa"	Public institution	Corso Vercelli, 141/7 - 10155 Torino
ToDream shopping centre	Private	Corso Romania, 460 – 10156 Torino
Leroy Merlin	Private	Corso Giulio Cesare 424, 10156 - Torino
Politecnico of Turin, Planning School	Public institution	Viale Pier Andrea Mattioli, 39 - 10125 Torino
City of Turin - Department of Urban Planning	Public institution	Piazza San Giovanni, 5 - 10122 Torino TO
City of Turin - Department of Educational Services	Public institution	Via Giovanni Antonio Bazzi, 4 -10152 Torino
City of Turin - Department of Environment	Public institution	Via Corte d'Appello, 16 - 10122 Torino

Table 1 | Turin Stakeholder list (Source: Authors elaborations)

The role of stakeholders in the selected school areas has been analyzed based on the following criteria:

- **Territorial relevance:** Actors had to be active within or have a significant influence on Barriera di Milano and/or Regio Parco, whether through services, infrastructure, or informal networks.
- **Sectoral diversity:** The mapping aimed to include a broad spectrum of sectors: public institutions, third-sector organizations, grassroots collectives, schools, health services, religious institutions, and economic actors (e.g., shopkeepers, entrepreneurs).
- **Level of engagement:** Stakeholders were prioritized based on their degree of active engagement in community life, projects, and governance processes - rather than solely on their formal presence.
- **Historical presence vs. Emerging influence:** Attention was paid to balancing long-standing organizations with newly formed or less-visible entities, especially those representing marginalized or less-represented voices.

Figure 5 | Turin Stakeholder map (Source: Google MyMaps elaboration)

The six schools' areas are studied in their stakeholder composition. Each school is thus analyzed individually and in relation to the social actors with which it would be possible to imagine a future relationship (based on existing evidence) for the co-design a community creation process that will take place in the following months. This will contribute to conduct further consideration the definition of the pilot school courtyard. As shown in Table 1, the majority - but not all of them - of the selected schools are part of the so-called "***Istituto Comprensivo***" (comprehensive institute). It refers to an educational institution that brings together different levels of schooling under a single administrative structure. Typically, it includes: (i) **kindergarten** (*scuola dell'infanzia*); (ii) **primary school** (*scuola primaria*); and (iii) **lower secondary school** (*scuola secondaria di primo grado*). These schools may be located in different buildings or even in different neighborhoods, but they are managed by the same headteacher (*dirigente scolastico*) and administrative office. The goal of an *Istituto Ccomprensivo* is to ensure continuity in students' education from early childhood through the end of lower secondary school (approximately ages 3 to 14), and to improve coordination among teachers and curricula across the different levels. This factor should be taken into consideration in the choice of school: the comprehensive institute can guarantee continuity for the users of the climatic shelter, acting as a hub for activities and events even for nearby schools (part of the same institute), since the community of students, teachers and families is likely the same. The choice to focus on primary schools was driven by the larger student numbers and the fact that the majority of these are public. Furthermore, **the existence of comprehensive institutes can connect kindergarten students to use the future climate shelter for educational activities as well.**

A. Comprehensive Institute Aristide Gabelli, Barriera di Milano

As a melting pot of different languages and cultures, the school is a place to experience **linguistic and cultural diversity as a resource**, offering added value to students' education. To meet the needs of a diverse audience, the Comprehensive Institute (I.C.) emphasize an innovative approach to teaching, offering a diverse range of learning situations tailored to students' learning needs and information-processing methods. In recent years, the I.C. Gabelli has also given **ample space to STEM subjects, which represent the key topics of a forward-looking education,** geared towards developing individuals capable of competing, reacting, and managing an unknown and uncertain future. The I.C. is located in a complex and diverse area characterized by a **strong migration trend**, creating a multicultural environment where, at times, economic and cultural poverty are evident, coupled with a strong desire for change. The Institute's student population is made up of Italian-speaking students and, for the most part, second- and first-generation foreign students who live in the areas served by each school, although there are also some students who live outside the area. The school environment is a **cultural heritage that must be safeguarded**, and linguistic diversity is a structural characteristic of our schools, reflecting the broader social reality in which they are located.[4]

Primary School Giovanni Enrico Pestalozzi

Pestalozzi Primary School is located in the western area of Barriera di Milano, between Via Cigna and Corso Novara. Featuring a tree-lined, shaded courtyard, it is close to Piazza Teresa Noce, a **recently regenerated urban area.** This is where the Open Innovation Centre of the City of Turin (Open Incet), is located. Open Incet is an example of a public-private partnership, led by the Giacomo Brodolini Foundation, which aims to promote and accelerate the local ecosystem for social innovation and build international connections. The Centre support the transformation of ideas, research, and technology into shared value for the Piedmont region and its economic and social stakeholders.

In relation to greenery in the area, the **renovated Parco Peccei** is located close to the school. From a large former industrial area, with its 27 thousand square meters of lawn, 420 trees, LED lights, games and equipment for adults and children, cycle paths and a cathedral left untouched to host large social and aggregation events, the area is a hotspot able to welcome the ideas and needs of its users. Moreover, the school is not far from two of the

[4] https://www.icgabellitorino.edu.it/la-scuola/presentazione/

main community hubs of Barriera di Milano: the **neighbourhood house "Bagni di via Agliè" and the hub of "via Baltea"**. The latter is an urban regeneration project with social and cultural impact: a community space that promotes collaborative cultural practices based on participation and activism in collaboration with more than 100 local associations and organizations. Its aim is to integrate commercial and productive activities with particular attention to the social aspect and the construction of supportive and quality relationships. Built in the spaces of a former printing house, since 2014 it has hosted craft workshops, cultural projects, a catering business and spaces for citizens and the neighbourhood. The Bagni Pubblici di via Agliè (Public Baths of via Agliè) are part of a collaborative network of seven other projects called Neighbourhood Houses: eight public spaces redeveloped through collaboration between public institutions, banking and corporate foundations, social enterprises, associations, and citizens. The project began in the 1990s with the aim of encouraging European institutions to foster a more symbiotic relationship between institutions and citizens, to move beyond sectoral policies, and to connect centres and peripheries. The result was the creation of Houses that offer services, courses, and workshops, bring together and organize the activities of a large number of associations and informal groups, create opportunities for socialization and recreation, and provide spaces. Another area close to the school is the **Piazza Crispi Market**: a local market (now slowly closing) held on Wednesdays and Fridays. On the first and third Saturdays of each month, the square hosts a small market selling antiques, modern antiques, and vintage goods. From a cultural point of view, the **Ettore Fico Museum** offers an international cultural program through exhibitions, cultural events, seminars, round tables, and meetings, aimed at engaging a wide range of people interested in modern and contemporary art, without excluding forays into ancient art. According to official sources of the National Evaluation System – *Scuola in Chiaro*, the **Pestalozzi Primary School has 292 pupils distributed across 14 classes.**[5]

Primary School Aristide Gabelli

The Gabelli primary school is located in the very heart of Barriera di Milano. Close to the school (between Corso Palermo and Via Crescentino) a **popular market arises in Piazza Foroni**, also known as Piazza Cerignola. The market complex encompasses sections reaches a total area of approximately 7,000 square meters in the centre of Barriera di Milano. The school shares a vicinity with the main community hubs of the area with the Pestalozzi (**Bagni di via Agliè and via Baltea**). Another important institution in the area is the **Salesian complex "Michele Rua".** The facility includes an oratory, a summer camp for children, a school, and a theatre (Monterosa Theater).

[5] https://unica.istruzione.gov.it/cercalatuascuola/istituti/TOEE8B802A/ic-gabelli-pestalozzi/alunni/

The oratory has recently signed an **Educational Community Pact**, called "GenerAzioni in Barriera," established as part of the "Barriera Oggi" project. It aims to formalize the establishment of a Territorial Educational Community (CET). The Activity Plan includes the identification and training of Community Activators with the aim of engaging and involving young people who will be involved in a co-design process aimed at redeveloping a space at the Michele Rua Salesian Oratory, which will be made available to the project and the neighbourhood. The goal is to strengthen the ties between the various entities, which already have connections for various reasons, so that the Barriera di Milano neighbourhood can see an active community capable of generating its own responses to the challenges it faces and adopts, starting with listening to the local area and its people. Moving to the eastern part of the neighbourhood, more social-cultural entities arise. The **social agriculture project "AgroBarriera: Boschetto",** located in via Petrella, is led by **RE.TE. Ong**. It is active since 2015 in Turin's Barriera di Milano and Regio Parco neighbourhoods, with the involvement of numerous local organizations. AgroBarriera promotes urban, social, and sustainable agriculture, using the multifunctionality of agriculture as a tool to enhance citizen well-being, encourage local development, and foster social inclusion. Among other organisations with a relevant impact in the area there are **Giorgio Amendola Foundation, Acmos association, civic library Cesare Pavese and Bunker cultural association**. The Gabelli Primary School boasts a beautiful internal courtyard, protected by the school building on all four sides. The courtyard is divided into an area with gravel and concrete, and another with numerous trees that provide shade, even for outdoor learning activities. However, shade do not seem to be a major issue, as the building is multi-story, creating shade on the sides throughout the day. According to official sources of the National Evaluation System – *Scuola in Chiaro*, the **Primary School Gabelli has 388 pupils distributed across 18 classes**.[6]

B. Comprehensive institute Ilaria Alpi, Barriera di Milano

The Ilaria Alpi Comprehensive Institute was founded in 2015, and extends across the northern part of Turin, the Aurora and Barriera di Milano neighborhoods. It encompasses a variety of facilities: Peremprune Preschool, three Primary Schools, and the Croce Middle School. The context in which the Ilaria Alpi C.I. is located, though complex, is **characterized by a rich diversity, where the exchange between different cultures is seen as a valuable resource.** The I.C. is characterized by a strong focus on active teaching methods and inclusiveness. Moreover, it is both a service to the public and to the community built around shared educational principles. **Families play an active role in school life, also participating through committees and working groups**. In keeping with Ilaria Alpi's thinking, schools must open up, here and now, designing diversified interventions that involve the entire school population with the educational vision of "a school for each and all"[7].

[6] https://unica.istruzione.gov.it/cercalatuascuola/istituti/TOEE8B8019/ic-gabelli-cap/alunni/

[7] https://www.icilariaalpitorino.it/la-scuola/presentazione/

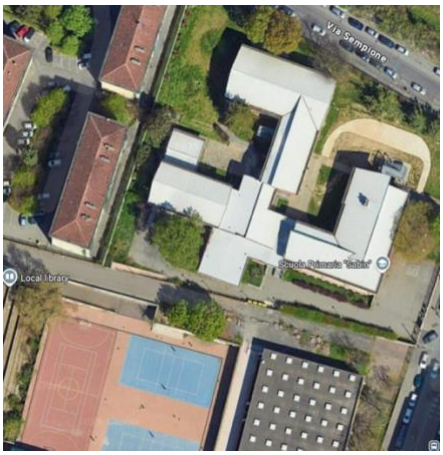
Primary School Giuseppe Perotti

Most of the main actors located in the area of Perotti Primary School are shared with the Gabelli Primary School: being located slightly more to the north, some other stakeholders may emerge. Among those, the **public hospital "San Giovanni Bosco"** plays a very important role. Several studies show the advantages of greenery in and near hospitals. Exposure to hospital green spaces has been associated with a range of positive health outcomes, including improved mental health, reduced anxiety, and faster recovery from illness or surgery (Ulrich, 2002). Other studies suggest that using gardens can help to alleviate stress in medical professionals, increase job satisfaction, and may contribute to the retention of personnel (Cordoza et al., 2018). The Perotti Primary School presents a **relevant number of trees on the side closest to the school entrance**, as well as a playing field not protected from the sun's rays. However, the **size of the schoolyard area is rather small when compared to other schools in the area**. The school, although part of a comprehensive institute, is located approximately one and a half kilometers from the main office and the other buildings, which are located in a different neighborhood (Aurora), not taken into consideration in MAINCODE project. According to official sources of the National Evaluation System – *Scuola in Chiaro*, the **Primary School Giuseppe Perotti has 463 pupils distributed across 23 classes**.[8]

C. Comprehensive Institute Ennio Morricone, Barriera di Milano

The Institute on Corso Vercelli is located within the Barriera di Milano neighbourhood, which is in turn divided into four districts: Montebianco, Monterosa, Maddalene, and Cimitero. Users primarily come from the Monte Bianco and Monte Rosa neighbourhoods.[9]

Primary School Albert Sabin



The school is located in an area on the border between Regio Parco and Barriera di Milano. In the immediate vicinity of the school is the **Cascina Marchesa civic library**, a cultural centre currently undergoing renovation. What sets the school apart is certainly its proximity to two important city parks: **Parco Peccei and Parco Sempione,** which divides district 6 from district 5, within which are located **sports facilities and cultural institutions** (such as, for example, Spazio211 - a very important music hub). The school has a **large and green schoolyard, with limited shade and wide space for outdoor activities**.

[8]https://unica.istruzione.gov.it/cercalatuascuola/istituti/TOEE8BD012/ic-ilaria-alpi-perotti/alunni/
[9] https://www.icmorricone.edu.it/la-scuola/presentazione/

The library, however, being across the street, provides sports facilities such as soccer and basketball courts. According to updated data from the National Evaluation System - *Scuola in Chiaro*, the **Albert Sabin Primary School has 316 pupils, distributed across 14 classes**.[10]

D. Comprehensive Institute Bobbio-Novaro, Regio Parco

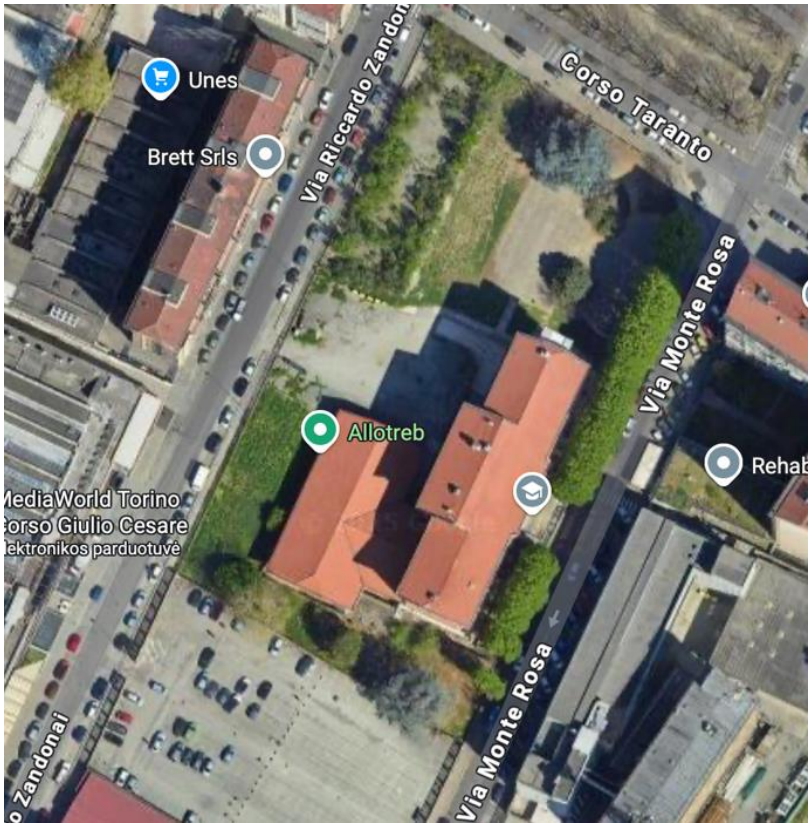
Starting in the 2023-24 school year, the Bobbio Novaro Comprehensive Institute consists of three buildings: the Via Ancina Secondary School and the Novaro and Levi Primary Schools. The student population is approximately 1,300: students come from diverse socio-economic backgrounds, given the extensive area surrounding the four buildings that comprise the comprehensive school. The C.I. is located in an **area that has hosted several waves of migration** (internal – from south Italy -in the past, and international in recent decades) that have contributed to shaping Turin's urban fabric and its multiple identities. The institute places particular emphasis on welcoming, inclusion, valuing differences, and social advancement. However, it also fosters excellence through curricular and extracurricular activities, ranging from Latin language and culture to language certifications, STEM subjects, and music. The school participates in **various projects and programs**: ministerial, with the Piedmont Region, with the Department of Educational Services of the Municipality of Turin, with the Compagnia di San Paolo School Foundation, with the Cassa di Risparmio di Torino, with Coop, and with Save the Children. Over the years, it has established partnerships with the social services on Via Leoncavallo and the child neuropsychiatry department on Via Tamagno. With the after-school program at the **Michele Rua Oratory** and the neighbourhood vocational training centres (partners, respectively, in the PAS and LAPIS projects for the prevention and fight against school dropout); with the Levi Library (reading projects and family support desks), with the **Mamre Foundation** (for inclusion and integration), with the **ANPI** (citizenship and legality education), and with the **Local Police Proximity Unit** (for the prevention of bullying and cyberbullying). The C.I. has extensive experience in welcoming students with special educational needs and disabilities, which requires the presence of support and reinforcement teachers who facilitate the formation of an inclusive class and allow for more personalized small-group teaching.[11]

Primary School Carlo Levi

The school is located in a **heavily built-up area**. Its proximity to the district's main thoroughfare - Corso Giulio Cesare - impacts its potential for transformation, effectively acting as an urban barrier. While the west side offers concrete and a few retail chains (e.g., MediaWorld), the north, south and east sides are home to interesting stakeholders. Firstly, the **San Giovanni Bosco Hospital**, the main healthcare hub for the North Turin area. As shown before, this could foster an ecosystem of patience and personnel from the hospital to actively use the climatic shelter area to improve quality of life. On the other side of the school's access road is the **Risurrezione del Signore Parish**, which hosts a wide summer

[10] https://unica.istruzione.gov.it/cercalatuascuola/istituti/TOEE8B701D/ic-cso-vercelli-a-sabin/alunni/
[11] https://www.icbobbionovaro.it/la-scuola/presentazione/

program for children. Another interesting actor is the **Coop Supermarket** on via Botticelli: it is known for carrying several projects to enhance the local area and support families in difficulty. The north side is bordered by Corso Taranto, which offers a shaded area but lacks any real green spaces. Continuing along the street, you reach two important attractions, the **Intercultural Centre of the City of Turin**[12] and **Arrivore Park** (located further north, bordering the Stura River).



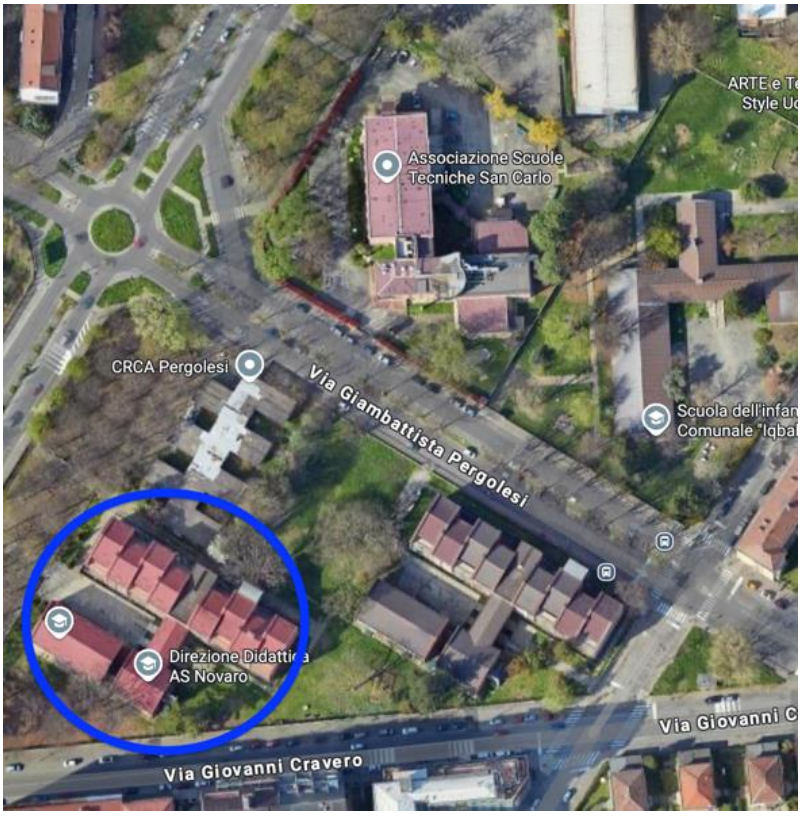
The Intercultural Center of the City of Turin was founded in 1996 with the aim of offering all citizens, both native and immigrant, intercultural education opportunities as well as opportunities for meeting, dialogue, and discussion on topics and issues of common interest. Its activities are overseen by a Scientific Committee. For several years, the Centre has focused on the issue of second-generation youth and on providing venues for building a shared youth culture between Italian and foreign youth. In 2009, it launched the "Giovani al Centro" (young people at the centre) at the project, which targets the broad segment of minors, adolescents, and young adults who are trying to integrate into the city. Close to the school area there are also sport association and facilities, that could benefit from a new green area (Progetto SLIP, Unicorno Style, Mercadante Sport, ecc). In the gym of the school, Allotreb volleyball is already experiencing the use of a student facility: a climatic shelter in a new renovated area could also improve community gathering before or after sport activities. **The Carlo Levi schoolyard is very large and divided into three different surfaces: grass, concrete, and a gravel/grass mix. This last section of the school area shows thus potential.** It is a plot of land recently reacquired by the City of Turin and subsequently reclaimed. Some experiments have already been conducted there (primarily in urban horticulture, with the aforementioned "Rete Ong").[13] This strip of land is connected by a gate to the road behind the school and lacks natural shade. According to updated data from the National Evaluation System - *Scuola in Chiaro*, the **Carlo Levi Primary School has 392 pupils, distributed across 19 classes**.[14]

[12] http://www.interculturatorino.it/chi-siamo/il-centro-interculturale/

[13] https://www.torinoclick.it/territorio/dalla-scuola-allorto-nasce-lo-spazio-educativo-di-via-zandonai/

[14] https://unica.istruzione.gov.it/cercalatuascuola/istituti/TOEE8CF029/ic-bobbio-novaro-clevi/alunni/

Primary School Bobbio-Novaro



The school is located near the Intercultural Centre, in the eastern area of Regio Parco. The complex in which it is located is very conveniently connected, as it also includes **two kindergartens –** the Iqbal Masih Municipal Preschool and the Guizzino Municipal Nursery School. The student's community from these facilities could benefit directly from a climatic shelter located in their surroundings. Moreover, the presence of **"Scuole Tecniche San Carlo"** could be a great ally. The San Carlo Technical Schools Association has been providing vocational training since 1848, preparing students for careers in artistic crafts, cultural heritage, and personal care. It focuses on carpentry, restoration (of wood, paper, and paintings), fashion, interior decoration, stage construction, beauty treatments, and hairstyling. The **school has a wide schoolyard, full of trees and grass**. This leave space for many different opportunities when it comes to shelters or educational activities in the open air. According to updated data from the National Evaluation System - *Scuola in Chiaro*, the **Bobbio-Novaro Primary School has 214 pupils, distributed across 10 classes**.[15]

3.1.3 Potential synergies and risks

Among the tools used to evaluate synergies and risks in the selected areas, **SWOT and PESTLE analyses** (Table 2 and Table 3) help to recognise the framework in which stakeholders are contextualised in the Barriera di Milano and Regio Parco neighbourhoods. Synergies and risks refer to the current situation in both neighbourhoods: **what is happening right now, and what could contribute to more effectively undertaking future engagement steps in the MAINCODE process**.

[15] https://unica.istruzione.gov.it/cercalatuascuola/istituti/TOEE8CF018/ic-bobbio-novaro/alunni/

STRENGTHS	WEAKNESSESS
• **Ongoing project** in the schools' courtyards/facilities • **Interest from the municipality** • **Institutions close to the schools** • **Institutional momentum** • **New green area projects** in the neighborhoods • **Schools' centralities**	• **Socio-economic fragility**: The local context may limit active participation, funding capacity, and long-term upkeep • **Infrastructural constraints** • **Limited technical capacity**: the schools may lack in-house expertise to support climate-resilient design without external help
OPPORTUNITIES	**THREATS**
• Gather the momentum of **regeneration of the area**, thanks to ongoing renovation processes. • The **main hospital** of the area is very close to the shortlist of schools. • **Scalability and replicability**: pilot project visibility: could serve as a model for similar interventions across Turin and beyond • **Co-design and participation**: chance to involve students, families, and local associations in planning and stewardship. • **Climate education**: embedding environmental literacy into the daily experience of students.	• **Dialogue with the constituency** of the neighborhood is uncertain. • **Administrative complexity**: potential delays due to land use regulations or unclear responsibilities over the new green space. • **Vandalism or neglect**: in under-maintained areas, there's a risk of deterioration or misuse of public spaces. • **Climate extremes**: future heatwaves or heavy rainfall events could test the resilience of the interventions if not properly designed.

Table 2 | Turin SWOT Analysis (Source: Authors elaborations)

P - Political	• **Supportive local governance:** the City of Turin and District 6 have demonstrated commitment to ecological transition and climate adaptation, particularly through initiatives related to the implementation of Nature-based Solutions (NbS). • **Potential bureaucratic delays:** administrative and permitting processes - especially concerning recently acquired public land - may slow down implementation. • **Educational policy alignment**: local and national educational frameworks increasingly support environmental and sustainability education, creating a favorable institutional environment.

E - Economical	• **Low-income context**: the surrounding neighborhood is economically vulnerable, limiting the potential for private fundraising or parental financial contributions. • **Public funding opportunities**: availability of municipal, national, and EU-level funding (e.g., PNRR, climate adaptation grants) offers key opportunities for financing the Climate Shelter. • **Maintenance challenges:** ensuring long-term financial sustainability and maintenance of green infrastructure may require dedicated budget lines and community partnerships. • **Private funding opportunities**: availability of big companies' interest in investing in the project furniture
S - Social	• **Vulnerable population**: many families in the area face economic and social hardship, which may also impact students' well-being and access to outdoor, healthy spaces. • **Community potential**: the school can serve as a social anchor point, promoting inclusion, environmental justice, and community engagement through co-designed solutions. • **Risk of disengagement**: if not properly involved, the local community may view the intervention as externally imposed or irrelevant.
T - Technological	• **Innovative solutions available**: access to Nature-based Solutions (NBS), permeable paving, shade structures, and low-cost cooling technologies is growing. • **Knowledge transfer needed:** teachers, staff, and municipal workers may require support and training to maintain and use climate-resilient infrastructure effectively.
L - Legal	• **Urban planning constraints:** integration of the new green space may require changes or exceptions to current land use or zoning plans. • **Safety and liability:** legal compliance regarding public safety, especially in schoolyards, must be carefully addressed in the design and implementation of the shelter.
E - Environmental	• **High vulnerability to heat**: the area suffers from urban heat island effects, lack of vegetation, and poor air quality - making it a priority for green adaptation. • **Potential for impact**: greening and shading interventions could significantly improve local microclimate, water retention, and biodiversity.

Table 3 | Turin PESTLE analysis (Source: Authors elaborations)

3.2 Halandri

The Municipality of Halandri, located in the northeastern part of the metropolitan center of Athens, belongs to the Regional Unit of North Athens in Attica Region, along with other eleven municipalities (Figure 6). **Halandri is the biggest municipality in the Regional Unit** covering an area of 10.805 km², with a population of 74,192 inhabitants. The Municipality consists mainly of residential areas that retain a character reminiscent of their suburban origin and are marked by relatively low urban density compared to the municipalities of the Central Sector of Athens, but higher that other municipalities of the Regional Unit, as shown in the map in Figure 7. In particular, Halandri has 7589.33 residents per km², according to the latest national Census survey conducted in 2021.

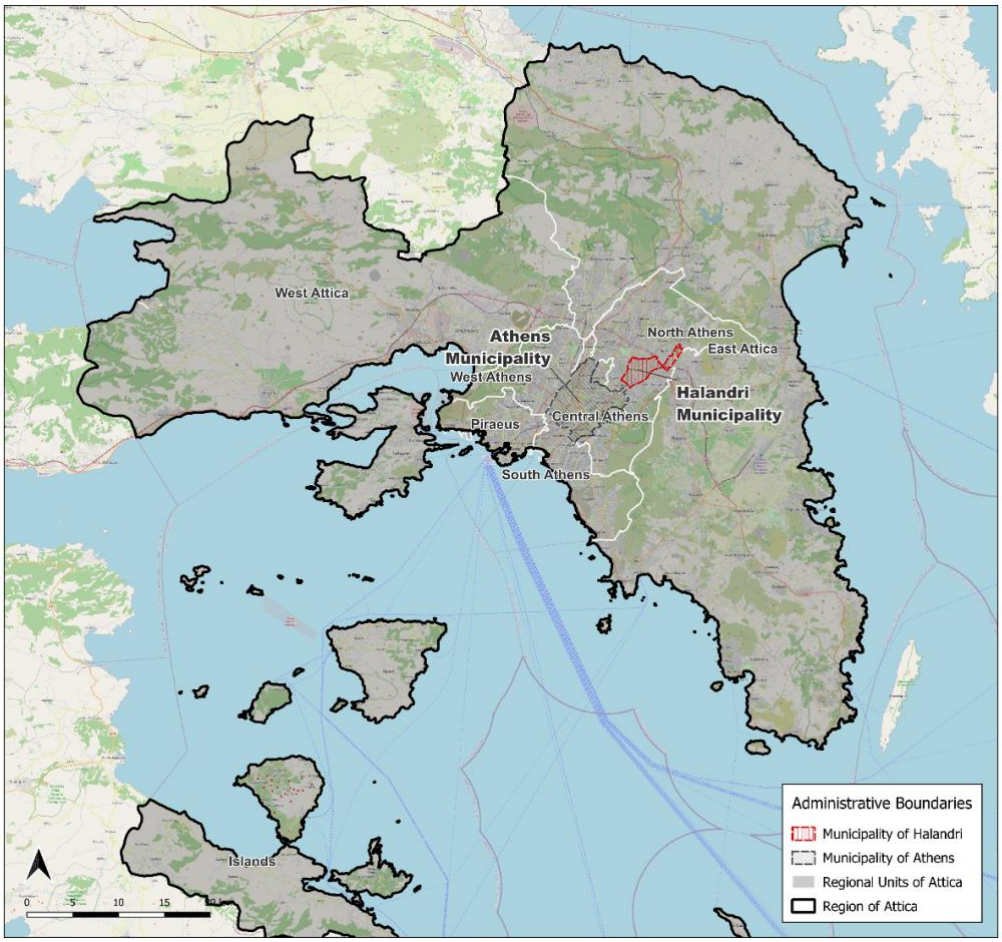


Figure 6 | The location of Halandri in the Region of Attica (Source: Authors elaborations)

The area of the Municipality of Halandri is divided into six Urban Planning Units: [] **Kato Chalandri**, [2] **Nomismatokopio**, [3] **Center**, [4] **Synoikismos – Polydroso**, [5] **Toufa – Metamorphosi**, and [6] **Patima** (see Fig. 9). The administrative connection of the Municipality of Halandri to the center of Athens, as well as its accessibility through the main road network and public transportation systems, specifically the metro (5 metro stations within Halandri) and the suburban railway (Doukissis Plakentias Station), makes the area a location for a wide range of activities and services with both local and regional significance.

Beyond strictly residential uses, the different neighborhoods of Halandri host a diversity of functions such as retail and wholesale trade, services, recreation, welfare, and healthcare. These serve not only the residents of Halandri itself but also the broader population of the surrounding municipalities in North Athens. In terms of climate and environmental characteristics, **Halandri presents a mixed profile of natural assets and urban challenges.** The area is increasingly affected by climate-related hazards, most notably extreme heatwaves during the summer months. In addition, Halandri faces heightened risks from urban flooding and wildfires, both of which have threatened the area in recent years. Although Halandri hosts a green zone along Halandri-Penteli stream, and certain dispersed green areas, access to quality green infrastructure remains limited. The ratio of parkland per resident is just 2 sq.m., significantly lower than the Athens average of 4.8 sq.m.[16], and walkability to well-maintained green areas is often weak. A key but underutilized environmental feature is the Halandri–Penteli stream and its surroundings, which form a continuous ecological corridor with notable biodiversity and present an opportunity for further development of green-blue infrastructure network.

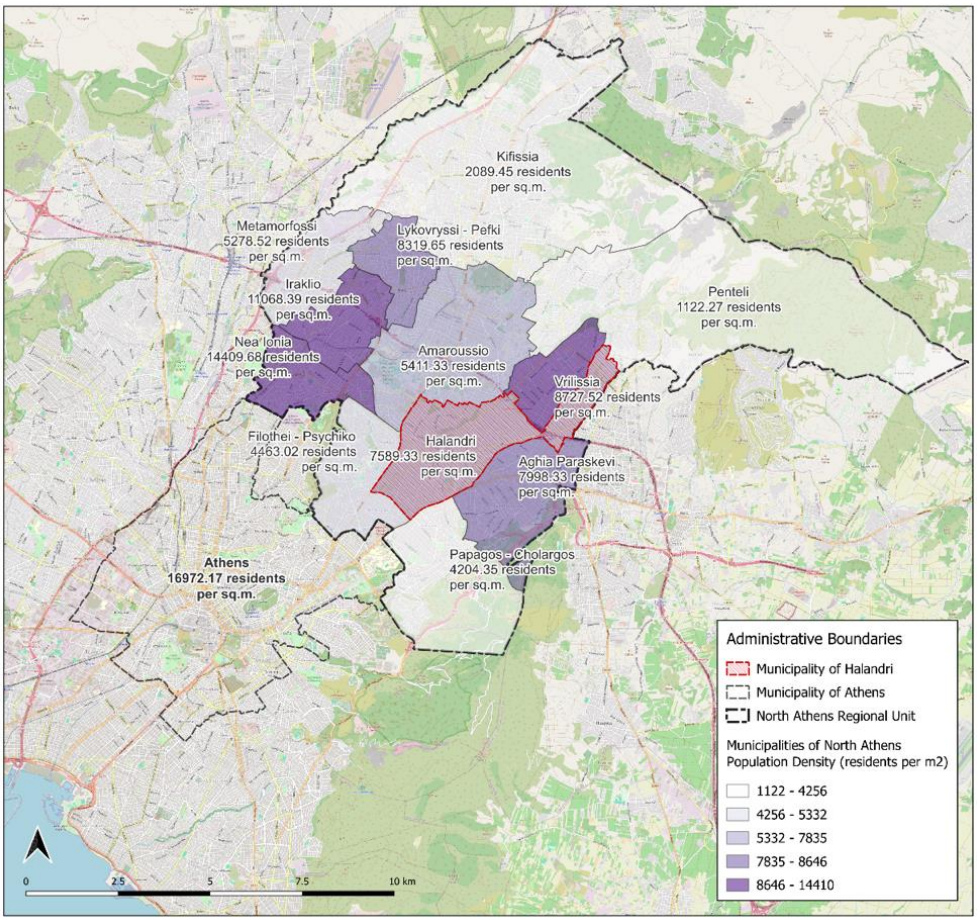


Figure 7 | Population density of the Municipalities of North Athens Regional Unit (Source: Authors elaborations. Data Source: Greek Census ELSTAT 2021)

[16] Information provided by the Municipality of Halandri, in the description of the area's challenges in the frame of Cultural H.ID.RA.N.T. project. https://culturalhidrant.eu/en/the-initiative/

Recognizing these challenges and potentials, the **Municipality of Halandri has initiated efforts towards urban regeneration and climate adaptation**.[17] Local stakeholders and civil society are increasingly engaged in these actions, which reflects a growing interest of the local community in citizen's participation and co-production initiatives. Together, these dynamics create the conditions for enhancing urban resilience and developing a cohesive network of climate shelters.

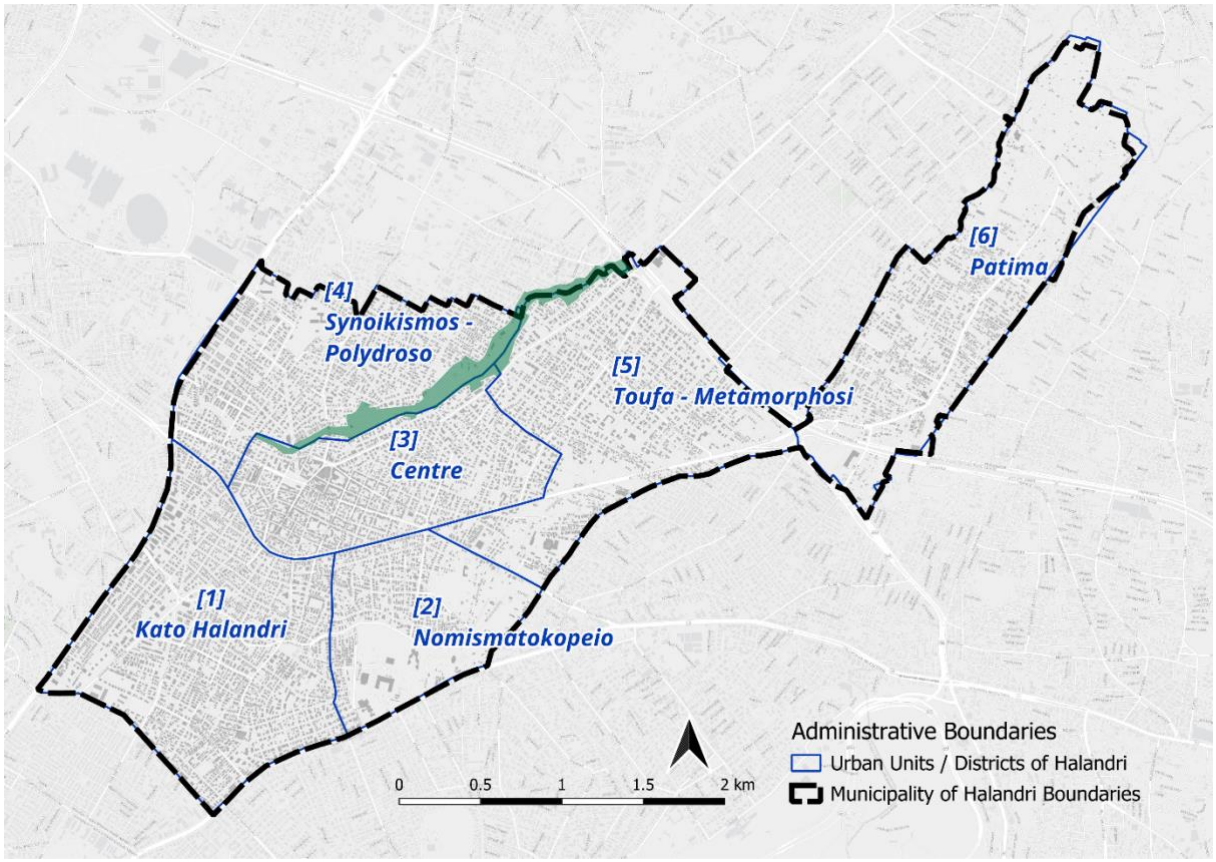


Figure 8 | The division of Halandri in Urban Planning Units (Source: Authors elaborations. Data Source: Halandri Geospatial Portal)

3.2.1 Stakeholder identification and classification

In the process of co-designing the Urban Climate Shelter in the pilot schoolyards in Halandri, alongside the school community, a broader set of local institutional and non-institutional local stakeholders are identified as potential co-actors, such as relevant municipal departments, and local associations or networks engaged in relevant urban, social, or environmental initiatives. Therefore, the stakeholder mapping process unfolds through a **two-level approach.**

[17] Indicative examples are the UIA project Cultural H.ID.RA.N.T., URBACT Hydro-Heritage Cities Network, the bioclimatic regeneration of the commercial central areas of Halandri, energy modernisation of public buildings, including school facilities, among others.

At the first level, **the identification and classification of local actors, organizations and groups is conducted at the city scale**, across several key dimensions: the sector or field of activity, the stakeholder type (public institutions, private sector entities, civil society organizations, grassroots or community-based groups, etc), and the geographical location or sphere of influence within the municipality. Particular emphasis is placed on the focus areas, namely the **central-west and southern districts of Halandri, that have been identified as the most socio-economic and climatic vulnerable zones in Halandri, as shown** in the comprehensive vulnerability map (Task 3.1). Here, the analysis goes beyond identification and classification, and delves into the stakeholders' levels of interest and influence, drawing on power/interest estimation frameworks. This evaluation facilitates a deeper understanding of potential synergies and risks, reveals the role each local actor may play in the project, and informs tailored engagement strategies.

The second level of stakeholder mapping focuses on the **key stakeholder group**, the primary school community of Halandri, including primary school leadership bodies, parent associations, and students. A **detailed sub-mapping of the primary schools is carried out**, considering social and spatial characteristics, existing capacities and challenges in relation to extreme heat, as well as estimated level of interest in participating in the co-design processes for the transformation of the schoolyard into urban climate shelter.

The selection of stakeholders in Halandri is based on a set of qualitative criteria designed to ensure both representativeness and alignment with the MAINCODE objectives. The aim is to create a stakeholder landscape that is not only comprehensive but also relevant to the co-design and pilot implementation of the climate shelter in Halandri. The criteria include:

- **Thematic relevance**, particularly stakeholders related to school infrastructure, the educational process, Nature-based Solutions (NBS), urban resilience, climate adaptation and protection from climate hazards.
- **Institutional authority or operational capacity**, particularly in relation to the planning, management, and governance of schoolyards.
- **Potential for collaboration or influence**, including existing partnerships with the municipality, prior involvement in EU-funded or local projects, or known capacity to mobilize community interest.
- **Geographical proximity to the focus areas**, with priority given to actors located in or actively operating within the central-west and southern districts of Halandri.

The stakeholder mapping process is grounded in a **mixed-method approach**, combining desktop research with field-based investigation and participatory engagement. On one level, it draws upon an extensive desktop review, utilising **municipal websites, local digital platforms, and public databases** to identify actors operating in the relevant sectors. This includes an inventory of institutional structures, service departments, school directories, and registered associations. Additionally, a **review of grey literature** has been carried out, including outputs from previous projects related to climate adaptation and school transformation realized in Halandri, as well as further relevant municipal strategies and policy documents. These provide insights into past collaborations, ongoing initiatives, and active local actors with experience in similar contexts.

At the same time, the process drew upon the **MAINCODE team's prior field research experience in Halandri**, which helped us develop in-depth contextual knowledge of local dynamics and actor networks. This experiential knowledge has been further enriched through **discussions with key informants from the Municipality of Halandri**. Finally, the stakeholders mapping has been expanded through: (i) an **online survey created and addressed to the school community of Halandri**, aiming to assess social vulnerability; and (ii) a **collective mapping activity**, conducted during the MAINCODE local kick-off event in Halandri in the beginning of June 2025.

Considering the diverse range of actors potentially involved in or affected by schoolyard transformations and UCS co-creation in Halandri, we have identified several relevant stakeholder groups. These include **municipal administrative entities, public schools and other public institutions, civil society groups and community-based organizations, as well as NGOs and private sector actors.** A scheme of the multi-level stakeholder ecosystem involved in the co-design of UCS in Halandri is presented below, in Figure 9.

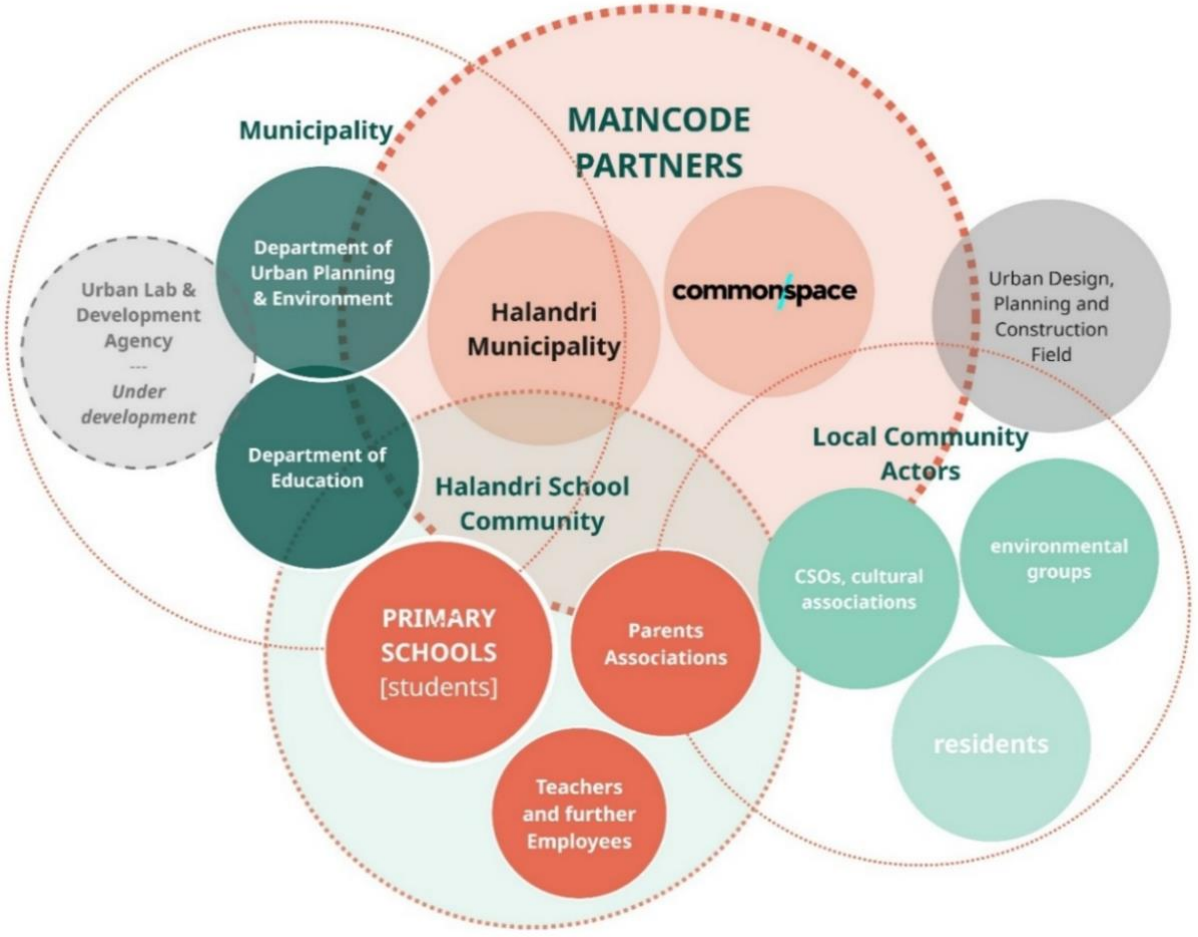


Figure 9 | Conceptual Stakeholders map of Halandri (Source: Authors elaborations)

As illustrated in the diagram, together with the project partners, three broader stakeholder categories are considered potential co-actors in the co-design of the climate shelter:

- **The school community,** which forms the project's core stakeholder group and includes primary schools, students, teachers, and parents' associations;
- **The public sector,** and more specifically municipal departments such as Urban Planning, Green Regeneration, Environmental Planning and Department of Education, as well as further public institutions and facilities in Halandri, and
- **Local civil society actors,** such as CSOs, environmental groups, cultural associations, and interested residents.

With the aim to materialise these conceptual stakeholder categories into the map of stakeholders in Halandri, an in-depth inquiry of the local entities, groups and actors has been conducted through desktop research. Table 4 below provides a comprehensive list with the identified stakeholders of Halandri, that serves as a dynamic stakeholder's database will keep being updated throughout the project's lifecycle. In this list stakeholders are organised in 5 groups:

- **Municipal administrative entities**
- **Public Schools**
- **Other Public / Municipal entities and facilities**
- **Civil Society Organizations (CSOs) / Community-Based Organizations (CBOs)**
- **NGOs and Private sector**

In addition to the name and type of stakeholder, this table includes the sector of activity (education, environment and climate change, health and social care, civil protection, other), geographical area within Halandri, and contact details.

STAKEHOLDER NAME	STAKEHOLDER TYPE	SECTOR / FIELD OF ACTIVITIES	GEOGRAPHIC REFERENCE
MUNICIPAL ADMINISTRATIVE ENTITIES			
Municipality of Halandri	Public institution /entity	Multiple public services	Entire Municipality of Halandri
Department of Education and School Care	Public institution /entity	Education	Entire Municipality of Halandri
Department of Environmental Planning	Public institution /entity	Environment & Climate change	Entire Municipality of Halandri
Department of Green Regeneration & Maintenance	Public institution /entity	Environment & Climate change	Entire Municipality of Halandri
Department of Urban Planning	Public institution /entity	Urban Planning, Design & Construction	Entire Municipality of Halandri
Civil Protection Department	Public institution /entity	Health / Social Care	Entire Municipality of Halandri
Primary school committee of Halandri Municipality	Public institution /entity	Education	Entire Municipality of Halandri

PUBLIC SCHOOLS [18]			
Public Kindergartens (14 in total)	Public institution /entity	Education	Entire Municipality of Halandri
Primary Schools (16 in total)	Public institution /entity	Education	Entire Municipality of Halandri
Public Lower Secondary schools (8 in total)	Public institution /entity	Education	Entire Municipality of Halandri
Public Higher Secondary schools (8 in total)	Public institution /entity	Education	Entire Municipality of Halandri
Public Vocational Secondary Schools - EPAL (3 in total)	Public institution /entity	Education	Entire Municipality of Halandri
OTHER PUBLIC / MUNICIPAL ENTITIES & FACILITIES			
"Mimis Vassilopoulos" Children's Library	Public Cultural Entity	Culture	Centre
"Aetopouleio" Cultural Centre - Library	Public Cultural Entity	Culture	Kato Halandri
Youth Center of Halandri Municipality	Municipal Social Care Facility	Health / Social Care	Nomismatokopeio
Community Centre of Halandri Municipality	Municipal Social Care Facility	Health / Social Care	Centre
Roma Support Centre	Municipal Social Care Facility	Health / Social Care	Nomismatokopeio
Social Solidarity Clinic of Halandri	Municipal Social Care Facility	Health / Social Care	Centre
Central Open Care Centre for the Elderly of Halandri	Municipal Social Care Facility	Health / Social Care	Centre
Open Care Centre for the Elderly of Kato Halandri	Municipal Social Care Facility	Health / Social Care	Kato Halandri
Open Care Centre for the Elderly of Toufa	Municipal Social Care Facility	Health / Social Care	Toufa - Metamorphosi
Sport Centre "Pavlos Panagiotopoulos"	Municipal Sports Centre	Sport	Kato Halandri
Sport Centre "Markos Papadakis"	Municipal Sports Centre	Sport	Kato Halandri
CIVIL SOCIETY ORGANIZATIONS (CSOs) / COMMUNITY-BASED ORGANIZATIONS (CBOs)			
Union of Parent Associations of the schools of Halandri	Network of organisations	Education	Entire Municipality of Halandri
Parent Associations of Primary Schools (16 in total)	Parent Association - CBO	Education	Entire Municipality of Halandri
Association for the Protection of the Environment and the Penteli - Halandri Riverbank "SOS Rematia"	Local Environmental Group	Environment & Climate change	Synoikismos - Polydroso
Oral History Group of Halandri	Local Cultural Association	Culture	Entire Municipality of Halandri

[18] The comprehensive list of the primary schools of Halandri, which represent the key stakeholder group, is provided in the coming chapter in Table 5.

Volunteer Corps of Halandri Municipality	Local Voluntary Group	Health / Social Care	Entire Municipality of Halandri
"Argo" Cultural & Scientific Association of Halandri	Local Cultural Association	Culture	Centre
Hadrian Water Community of Halandri	Local Association	Environment & Climate change	Entire Municipality of Halandri
Zero Waste Halandri	Local Environmental Group	Environment & Climate change	Entire Municipality of Halandri
Volunteer Civil Protection Group of Halandri	Local Voluntary Group	Civil Protection	Entire Municipality of Halandri
Girl-Guiding Association of Halandri	Local Association	Education	Centre
NGOs & PRIVATE SECTOR			
Hatzikonsta Youth Care Foundation	Orphanage Foundation	Health / Social Care	Synoikismos - Polydroso
"Stoupatheio" Special Education Service	Mental health Facility	Health / Social Care	Toufa - Metamorphosi
Athinaiko Oikotrofeio	Elderly Care Facility	Health / Social Care	Kato Halandri
Iris Halandri Elderly Care Unit	Elderly Care Facility	Health / Social Care	Kato Halandri

Table 4 | List of Stakeholders in Halandri organised in different stakeholder groups

The **geographic distribution of stakeholders in Halandri** indicates either the physical location of each identified organization or their primary area of impact and activity. Mapping the various relevant public institutions, municipal facilities, NGOs, and local associations reveals a clear concentration of stakeholders in the central part of Halandri, with this density extending toward the southwestern areas of the municipality (Figures 10).

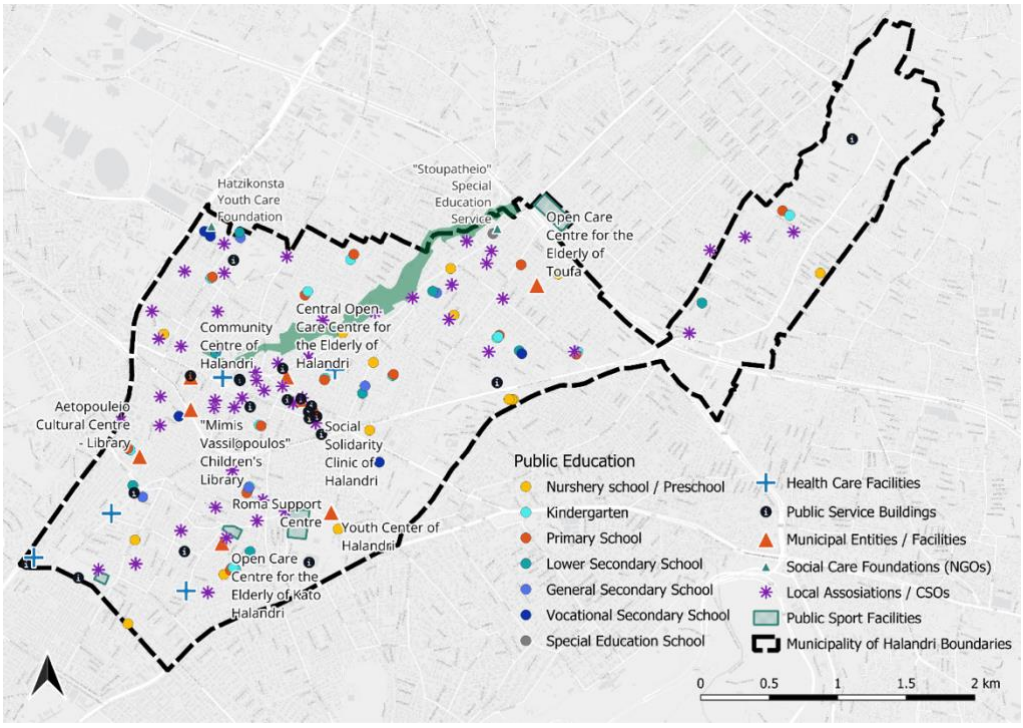


Figure 10 | Map of stakeholders and facilities. (Source: Authors elaborations. Data Source: Halandri Geospatial Portal, Authors Data Collection)

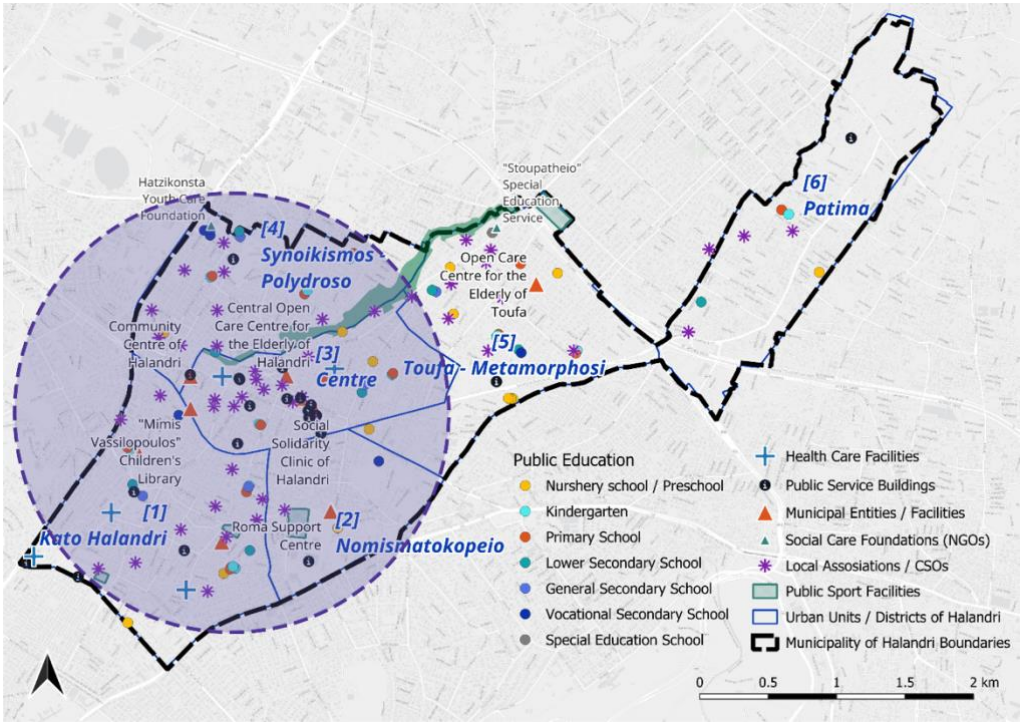


Figure 11 | Distribution of Stakeholders across the Urban Units of Halandri (Source: Authors elaborations. Data Source: Halandri Geospatial Portal, Authors Data Collection)

The Figure 11 shows the distribution of organizations and facilities across the different urban units of Halandri. The Municipality of Halandri includes a diverse urban fabric with distinct neighbourhoods, each reflecting different historical and spatial characteristics, which in turn influence the type and profile of local stakeholders and facilities. The southwestern section of the city, including the Centre, Kato Halandri, and Synoikismos, emerges as priority zone in terms of socio-economic challenges and exposure to climate-related risks, as identified in the vulnerability mapping (D3.1). The **Centre** serves as the administrative, commercial, and cultural core, hosting a variety of public services, retail shops, and cultural activities, and is a focal point of social and economic activity. To the south, **Kato Halandri** is a densely built residential area with mixed land uses and limited green space, often marked by older housing stock and small-scale commerce. This district hosts a number of municipal social care facilities, including elderly care centres and health support services, and community hubs, as well as cultural and sports facilities. The neighbourhood of **Synoikismos**, located toward the eastern edge, has a more fragmented urban layout, with low-rise housing and a more suburban character. Its proximity to the Halandri stream and adjacent green zone also makes it a focal point for stakeholders engaged in environmental, ecological, and community-based activities related to the stream corridor.

3.2.2 Stakeholder Analysis: influence, engagement, synergies and risks

The stakeholder landscape identified and presented in the previous chapter (3.2.1) will be analysed further in this section. A detailed assessment of the different stakeholder groups is provided, based on their **potential level of influence, interest, and the roles they are expected to play in the co-design process** throughout MAINCODE lifecycle. This analysis also reveals **potential synergies and risks**. The in-depth understanding of local stakeholders enables the project team to identify opportunities for collaboration, and to detect flagging areas where misalignment or lack of engagement may hinder the project's progress.

A. The role of Halandri Municipality and local public institutions and facilities

The **Municipality of Halandri** plays a central role in the co-design, implementation, and long-term maintenance of Urban Climate Shelters in schoolyards, with the capacity to influence the initiative's progress on multiple levels. This includes supporting the dissemination of project goals and activities, fostering engagement with the local community, facilitating coordination and dialogue with school administrations, helping ensure collaboration across different sectoral departments, and enabling the upscaling and replication of interventions through strategic planning and the securing of additional funding. Specifically, the Municipality of Halandri brings valuable prior experience from programs focused on urban regeneration through citizen participation, such as the **Cultural H.ID.RA.N.T.** [19] **project**, and active involvement in urban networks like URBACT [20], which promotes integrated development approaches to urban resilience and climate change adaptation. Notably, the Cultural H.ID.RA.N.T. UIA project has enabled the development of a strong supportive network of experts and institutions engaged in urban planning, cultural heritage, participatory governance, and innovative water management in Halandri. In this project the Municipality of Halandri, EYDAP S.A. (water management and distribution company) and various groups and experts that focus on participatory design, including COMMONSPACE, collaborated in the activation of the hidden local heritage and the upgrade of public spaces of Halandri, through the engagement of the local community. Stemming from the synergies and valuable outcomes of the Cultural H.ID.RA.N.T. implementation, an Integrated Territorial Investment (ITI) is currently being planned for the Hadrian Aqueduct, establishing a strategic reference point at the metropolitan level.

Additionally, ongoing municipal practices in sustainable mobility and waste management, public space regeneration projects, the energy modernization of public buildings, including school facilities, provide a solid foundation for synergies with the MAINCODE project in Halandri. Through these efforts, the Municipality fosters a culture of civic engagement in urban affairs and helps build a trust-based relationship with the local community.

The involvement of certain municipal administrative entities is also considered critical to the success of UCS co-design and implementation. As key departments are seen the **Education and School Care, Environmental Planning, and Green Regeneration & Maintenance**, which contribute directly to planning and integrating climate adaptation

[19] https://culturalhidrant.eu/en/

[20] https://www.chalandri.gr/urbact/

measures within school environments. Similarly, the **Urban Lab and Development Agency of Halandri,** that are currently under development, can play a crucial role, as they are expected to be active during the project's implementation phase. Furthermore, the Departments of Urban Planning and Civil Protection could assist in ensuring that proposed interventions align with urban planning regulations, and that UCS can act as a resilience hub during extreme heat events, especially for vulnerable populations. Finally, the Primary School Committee could provide valuable insights for the design of the process and facilitate required approvals. Together, these entities could provide key institutional support for the UCS co-creation process and its future replication. In parallel to administrative entities, the public sector stakeholder mapping includes a range of **public social care and community facilities** of Halandri, that provide support at the local sphere, particularly among vulnerable groups. Their involvement is meaningful not only for raising awareness and reaching diverse social groups, but also for community building and strengthening community resilience networks. Facilities such as the Youth Centre, Community Centre, Roma Support Centre, and the Social Solidarity Clinic provide essential health, social, and psychosocial services, while the Open Care Centres for the Elderly offer support, care, and social engagement opportunities for senior citizens. Moreover, cultural hubs such as the Children's Library, as well as public sports centres contribute to the well-being of the local population across different age groups. All these facilities serve as important neighbourhood anchors and have the potential to complement and enhance the impact of climate shelters.

B. The role of the school community

The **school community of Halandri** represents the key stakeholder group. The public-school landscape of the municipality comprises a network of 16 kindergartens, 14 primary schools, 8 lower secondary schools, 8 higher secondary schools, and 3 vocational secondary schools. Within the framework of MANCODE project, the primary focus lies on the primary schools, where UCSs are expected to be developed. However, schools from other educational levels also serve as important stakeholders. Some of them share the same yard with primary schools, and all of them function as reference points within the neighborhoods. Concerning **primary schools**, the school administrations, teachers, parent associations, and most importantly the students, are irreplaceable actors in the co-design and successful transformation of schoolyards into climate shelters. Their active engagement is essential at every stage of the process. Drawing on their everyday experience, students, teachers, and parents can provide valuable knowledge about the challenges, the shortcoming and the strengths of the school environment in response to extreme heat and further climate hazards. In this sense, their involvement in co-identifying practical needs and priorities, co-developing ideas and proposals and co-designing the climate shelter is necessary to ensure that interventions are meaningful, inclusive, and adapted to daily school life. Most importantly, the school community activates and sustains these spaces through regular use, transforming physical upgrades into vibrant, climate-resilient places of learning, play, and social interaction. Thus, without their active participation the concept of implementing

climate shelter in schoolyards cannot be effectively realized. Given the elevated role of schools in the stakeholder ecosystem, a dedicated analysis will follow in the next chapter.

C. The role of local CSOs and community associations

The identified civil society organizations in Halandri include **environmental groups, cultural associations** and further community-based initiatives, and could contribute significantly in the project through community building and involvement in participatory processes. Their knowledge of local needs and their presence in the neighborhoods make them valuable partners in awareness-raising, promoting inclusive co-design processes, and ensuring long-term use of the co-designed UCSs.

More specifically, the Association for the Protection of the Environment and the Penteli-Halandri Riverbank "SOS Rematia" is considered particularly relevant due to their environmental focus and concerns, the close connection with the stream ecosystem near Synoikismos, and the persistent involvement in various activities and networks of Halandri. Another association with long term engagement and important role in the local sphere is the Oral History Group of Halandri that focuses on the preservation of local cultural heritage and collective memories. This group, together with other cultural associations can help integrate place-based knowledge and cultural narratives into the UCS framework. Further citizens' initiatives like Zero Waste Halandri and the Hadrian Water Community can bring expertise on sustainability, circular practices, and local water management. At the same time, voluntary groups like the Volunteer Corps and the Volunteer Civil Protection Group of Halandri provide organizational capacity and support networks, while youth-focused organizations, such as the Girl-Guiding Association, offer opportunities for climate education and intergenerational dialogue.

Finally, **NGOs and private care institutions**, particularly those focused on vulnerable groups, expand the project's social inclusion reach. Of particular importance is the Hatzikonsta Youth Care Foundation in Synoikismos, which has operated as an orphanage facility for decades. The children hosted there attend the neighbourhood's public school.

D. Power – Interest Matrix of Stakeholders in Halandri

The above analysis of the stakeholder landscape in Halandri is visually summarised in a **power-interest matrix,** based on each actor's level of potential influence and expected interest in the UCS co-design project (Figure 12). In this diagram, Halandri Municipality and Primary School Community display both high level of influence and high (expected) interest. Their close alignment and active engagement create the conditions for co-design and lasting impact. Institutional actors such as the Departments of Education, Urban Planning and Environment, could be highly influential through their regulatory authority and capacity to scale solutions. However, limited or inconsistent engagement from them could pose a risk to project success. Mid-level stakeholders like teachers and parent associations bring strong local knowledge, and community trust, and they can play a vital facilitation role if supported by institutions. On the periphery, residents, local environmental groups and further local CSOs may lack institutional power, yet their involvement is essential for wider acceptance, making their low engagement a potential risk to the

embracement of the initiative by the community. Finally, the Urban Lab & Development Agency, still under development, represents an emerging synergy if integrated strategically. Summarizing, the diverse ecosystem of stakeholders, engaged in different guises and levels, is essential for fostering cross-sector collaboration, ensuring local stewardship, and building integrated, sustainable, and climate-resilient solutions within school environments and beyond.

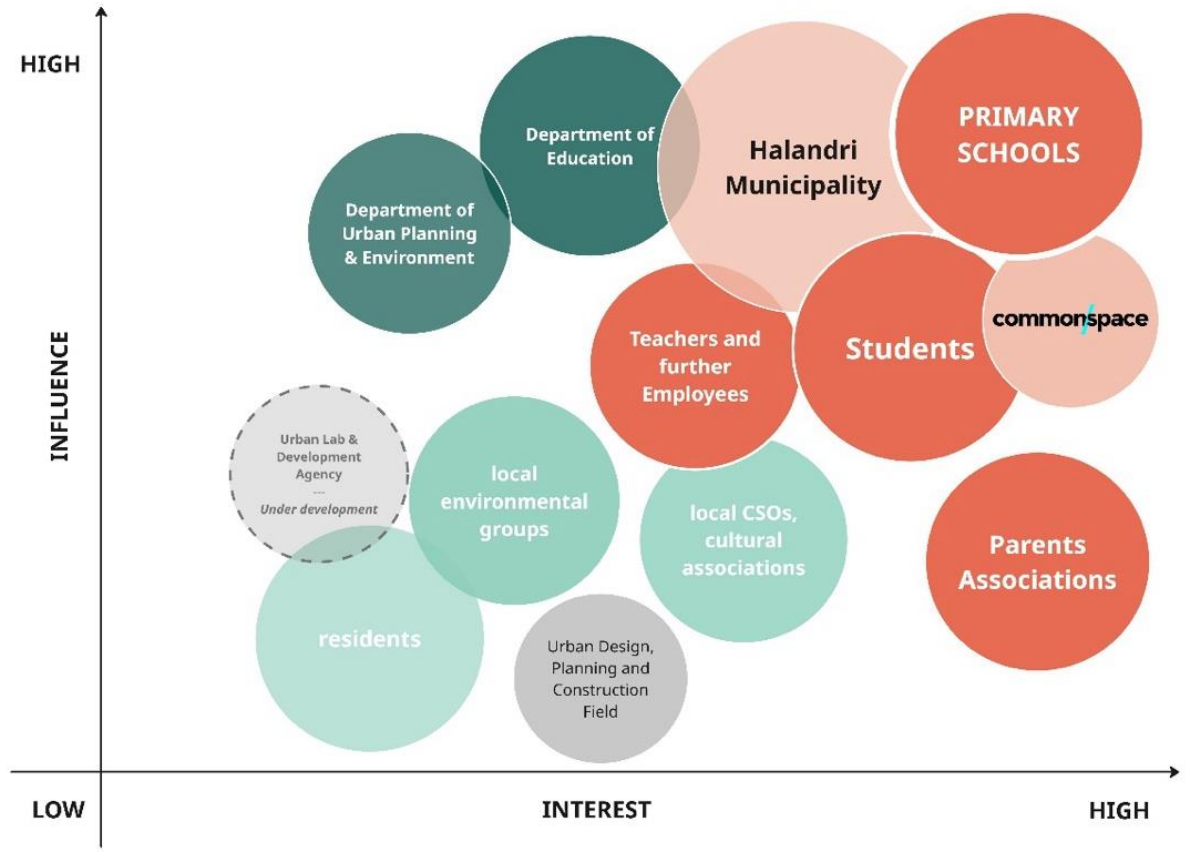


Figure 12 | Power – Interest Matrix of Stakeholders in Halandri (Source: Authors elaborations)

3.2.3 Key Stakeholders' Mapping: Analysis of primary school community

Primary schools are both beneficiaries and active participants in the project, and therefore the key stakeholder group. The Municipality of Halandri has **14 primary schools** in total (Figure 13). Concerning their geographical distribution, 9 of the 14 schools are located in the central, west, and south areas of the city, namely in the Urban Districts *Centre, Kato Halandri*, and *Synoikismos,* within the designated vulnerable focus area, as displayed on the map in Figure 14.

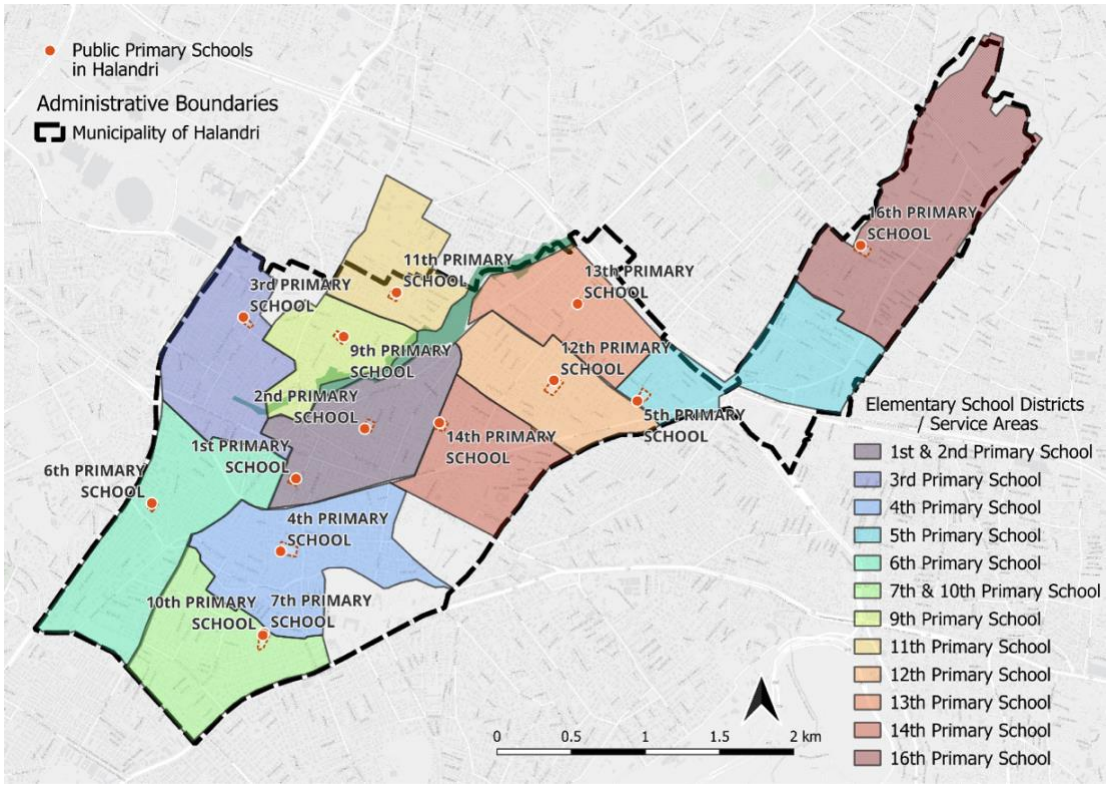


Figure 13 | Map of the 16 public primary schools in Halandri and their respective district areas (Source: Authors elaborations. Data Source: Halandri Geospatial Portal)

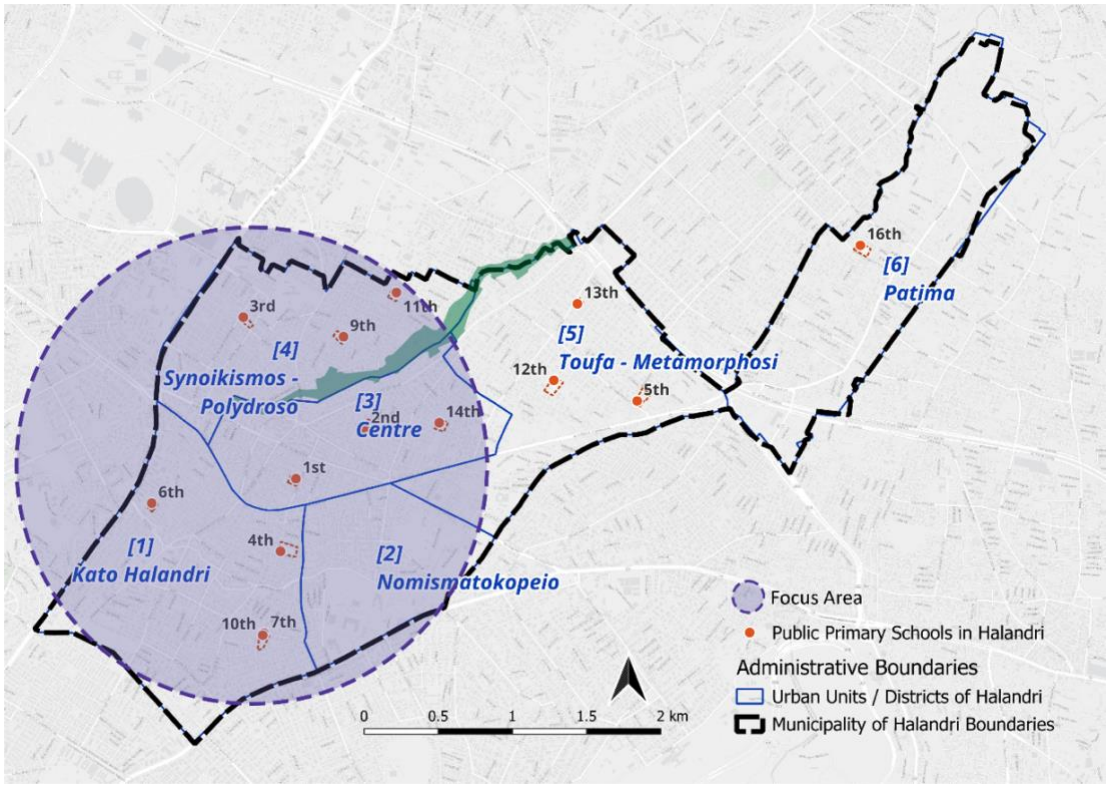


Figure 14 | Map of public primary schools' distribution across the Urban Planning Units of Halandri (Source: Authors elaborations. Data Source: Halandri Geospatial Portal

PRIMARY SCHOOL	AREA / GEOGRAPHIC REFERENCE	ADDRESS	PRESENCE IN KICK-OFF EVENT & DECLARED INTEREST
1st Primary School of Halandri	Centre	42 Aristofanous St & Karaoli & Dimitriou St, Halandri	**YES**
2nd Primary School of Halandri	Centre	F. Litsa St & Kallisperi St, Halandri	**YES**
3rd Primary School of Halandri	Synoikismos - Polydroso	Marathonos St & Mikras Asias St, Halandri	**YES**
4th Primary School of Halandri	Kato Halandri	Salaminos St & Aristofanous St, Halandri	**YES**
5th Primary School of Halandri	Toufa - Metamorphosi	2 Vrilission St & Metamorfoseos St, Halandri	**NO**
6th Primary School of Halandri	Kato Halandri	2 Filikis Etairias St, Halandri	**YES**
7th Primary School of Halandri	Kato Halandri	24 Kritis St, Halandri	**YES**
9th Primary School of Halandri	Synoikismos - Polydroso	17 Zalongou & Androutsou, Halandri	**NO**
10th Primary School of Halandri	Kato Halandri	24 Kritis St, Halandri	**YES**
11th Primary School of Halandri	Synoikismos - Polydroso	24 Krinon & Kriezi, Halandri	**YES**
12thPrimary School of Halandri	Toufa - Metamorphosi	Ioanninon & Taygetou, Halandri	**NO**
13th Primary School of Halandri	Toufa - Metamorphosi	13 Olympou & Ileias, Halandri	**NO**
14th Primary School of Halandri	Centre	Thiseos & Euripidou, Halandri	**YES**
16th Primary School of Halandri	Patima	Tritsi & 2 Papanikolaou, Halandri	**YES**

Table 5 | List of the Primary Schools in Halandri, including early expression of interest by representatives of the respective parent associations

To gain a deeper understanding of the primary schools, in addition to desktop research, we actively involved the school community in the data collection and mapping process, through an online survey, and a collective mapping activity.

The **online survey** focused on the assessment of social vulnerability & exposure to climate hazards, and was addressed to members of the school community of Halandri (parents, educators, and other staff members), with the aim to collect data related to social vulnerability and the exposure of households to risks associated with climate change, particularly rising temperatures. To date, the survey has gathered **190 responses**, and its

results will be analyzed in the Comprehensive Vulnerability Mapping (Deliverable D3.1). Notably, **the survey also served as an engagement tool**, offering insight into stakeholder interest and school-level representation. For example, the highest response rates came from the 1st Primary School in central Halandri and the 4th Primary School in Kato Halandri, while fewer or no responses were recorded from schools located in the city's northern districts. It also revealed critical information about the local community's engagement in collective actions related to climate adaptation. According to preliminary survey findings, 58% reported feeling inadequately informed about climate risks in their area, and the **large majority (89%) stated they are not currently involved in any programs related to local climate adaptation or improvement**. Despite this, 156 respondents (82%) expressed interest in participating in future local climate actions.

The **collective mapping activity** took place during the MAINCODE local kick-off event in Halandri in the beginning of June 2025. This session brought together **35 local actors**: municipality representatives and members of the school community (including school leadership and parent associations), it revealed local dynamics and played a pivotal role in the special sub-mapping of the primary schools. This was the first concrete step towards engaging the local stakeholders in the climate shelter co-design and co-production process, informing the school community about the project and allowing for early expressions of interest. Approximately **30 members of the school community of Halandri were present in the event, representing 10 of 14 schools of the municipality**.
During the collective mapping, parents and educators provided information about the layout and use of their schoolyards, and shared their experiences with past extreme weather events, their concerns, and suggestions. Central points thematized by all participants were the insufficient vegetation, and the pressing need for improved shading and cooling solutions. Their input was recorded on a map displaying all public primary schools in the area (Figure 15).

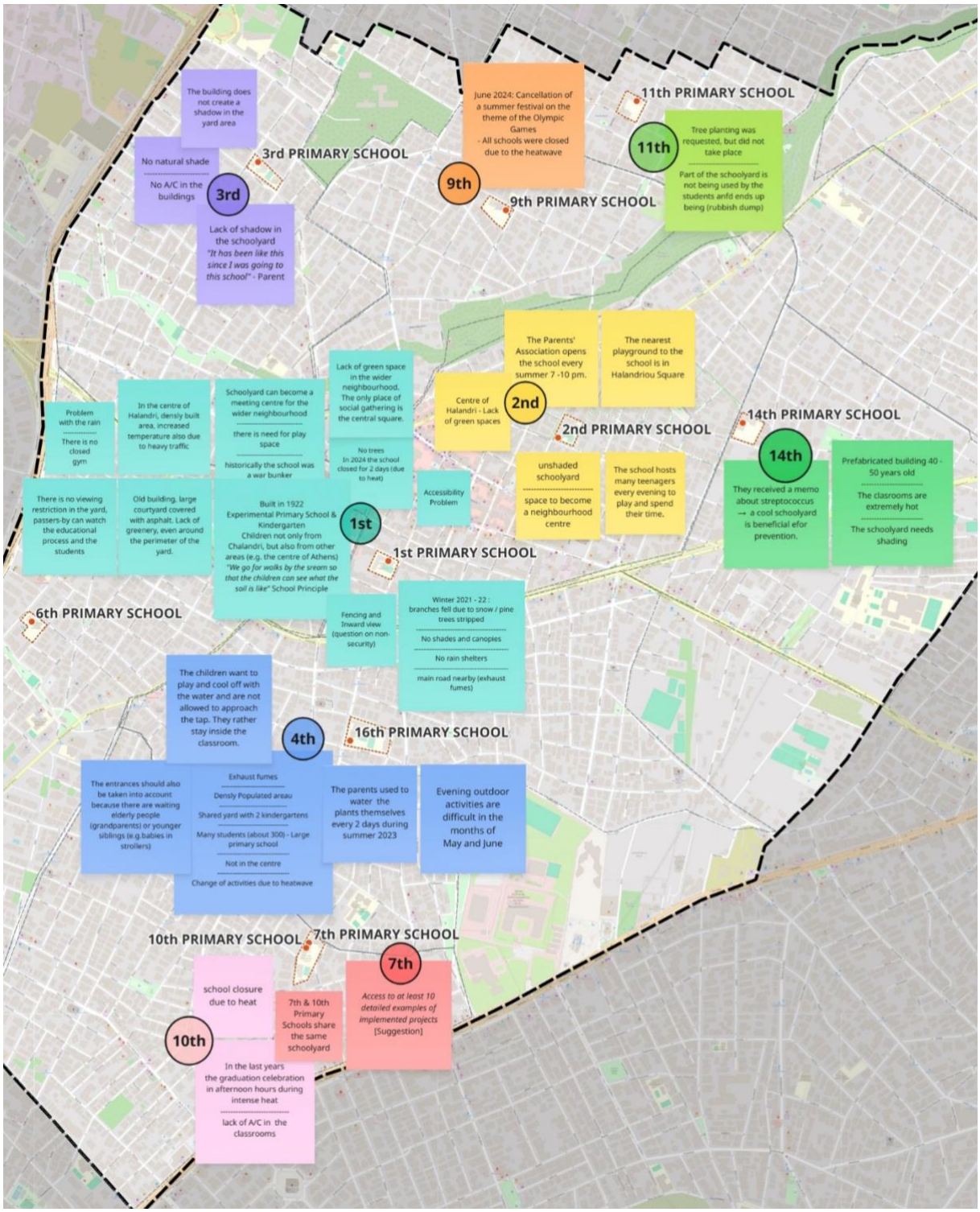


Figure 15 | Key characteristics of public primary schools in Halandri in terms of schoolyard function, challenges and opportunities to address heatwaves (Data Source: Collective mapping activity during the local kick-off event in Halandri, 02.06.2025)

4. Engagement Strategy

4.1 Turin Engagement Plan: proposals for co-design and future steps

The **Turin Engagement Plan starts with a preliminary outreach**. This involves efforts to establish connections with key local stakeholders. These include, but are not limited to, school staff and administrators, parent-teacher associations, local government representatives, and community-based organizations active in the area. The primary objectives at this stage are to introduce the concept of the climate shelter, share the project's overarching goals, and begin building a network of interested and engaged participants. This process also serves to gauge initial levels of interest and identify potential champions or partners who can support the project moving forward. Through informal meetings, emails, and presentations, the outreach aims to foster transparency, generate curiosity, and lay the groundwork for meaningful co-design and collaboration in the following phases.

Following the initial outreach, this phase focuses on **engaging selected stakeholders through informal conversations, short interviews, or focus groups**. The aim is to gain a deeper understanding of their perspectives on climate adaptation in school environments particularly in relation to outdoor spaces such as schoolyards. These interactions will help surface specific needs, concerns, expectations, and potential barriers as perceived by different groups, including teachers, parents, school staff, local residents, and community leaders. By listening actively and empathetically, the project team can ensure that the design and implementation of the climate shelter respond to real, locally grounded priorities. This qualitative input will serve as a foundation for building trust and guiding the co-design process in a direction that is both inclusive and context-sensitive. Moreover, having informal conversations or short interviews with selected stakeholders will help to better understand needs, concerns, and expectations regarding climate adaptation in schoolyards. A very fundamental step regards the selection of the final pilot school and consequently the establishment of a Local Working Group. **The first kick-off meeting for Turin is scheduled for September 23rd, 2025**. During this day, in the public spaces of Urban Lab, MAINCODE will be presented to the school community, as described in the previous paragraphs. The goal, with the participation of the Department of Education Services, is to gather as much information as possible about the school community. Furthermore, it will encourage early expressions of interest in being considered for the MAINCODE. Following this, the respective co-creation opportunities will be explored with the school representatives, and in-depth meetings will be proposed immediately, both individually and in structured focus groups. The event will officially launch MAINCODE and the following process already explained: future workshops, school selection, creation of the extended school community and, during the following year, the realisation of the climate shelter and related activities.

Building on the insights gathered during the earlier phases, **the project will organize and facilitate a series of participatory workshops with stakeholders from the shortlisted schools**. These workshops will create a space for open dialogue, allowing participants to

collectively assess the strengths, needs, and potential of each site. Through collaborative discussions and transparent criteria, the group will work toward identifying the most suitable school to serve as the pilot location for the climate shelter. This inclusive selection process is designed to ensure local ownership and shared commitment from the very beginning.

Once the pilot school has been selected, a **dedicated Local Working Group will be established to guide the next phases of the project**. This group will include a diverse mix of stakeholders - such as school staff, students, parents, municipal representatives, and members of the surrounding community - ensuring a range of perspectives and expertise are represented. The group will serve as a key partner throughout the co-design, implementation, and monitoring phases, fostering continuous dialogue, coordination, and accountability at the neighbourhood level.

Subsequently, and prior to launching the co-design phase, careful planning will be undertaken to define the structure, tools, and content of the participatory workshops. This includes selecting appropriate formats (e.g., interactive mapping, model-making, storytelling), identifying key thematic areas - such as shading solutions, biodiversity enhancement, water management, accessibility, and inclusive play - and tailoring engagement methods to suit different age groups and levels of familiarity with the topic. Special attention will be given to ensuring that all materials and activities are accessible, inclusive, and culturally sensitive, enabling meaningful participation from children, families, educators, and community members alike. The goal is to create an open and welcoming environment that encourages creativity and dialogue. That being said, a series of **hands-on workshops will then be conducted with the Local Working Group and other community members to collaboratively shape the vision, functions, and spatial layout of the climate shelter**. These sessions will combine imagination and practicality, allowing participants to co-create design elements that reflect their everyday needs, values, and aspirations for the schoolyard. Using visual aids, participatory mapping and collective decision-making, the workshops will result in a shared and community-rooted design proposal. This process not only strengthens local ownership but also ensures that the final intervention is both ecologically effective and socially meaningful.

Among the objectives of the next phases is to **explore potential collaborations with private stakeholders**. Support could ensure mutual benefits if the relevant stakeholders are located within the same district. This could provide greater capacity in terms of both finances and materials—the latter, in fact, could be recovered waste that can be reused for the project, with a view to sustainability.

After the initial co-design workshops, **draft concepts and preliminary design proposals** for the climate shelter will be synthesized and presented to stakeholders for review. This feedback phase is essential to validate the proposed ideas, identify potential gaps, and ensure that the design truly reflects the ideas expressed by the community. Interactive sessions - such as exhibitions, walk-through presentations, or annotated drawings - will invite constructive input from all participant groups, including children. Based on this **collective feedback**, MAINCODE team will refine and adjust the proposals to enhance feasibility, inclusivity, and local relevance. **This iterative process reinforces shared**

ownership, transparency, and trust among all involved actors. With a consolidated and community-approved design in place, the project will move into defining a clear and actionable roadmap for implementation. This will include outlining the technical steps required for development, identifying responsible parties for each task, and setting realistic timelines. Particular attention will be given to maintaining stakeholder involvement in this transition phase - clarifying roles for school staff, municipal departments, parents, and other local actors to ensure long-term support and maintenance. In parallel, MAINCODE team will explore funding opportunities from public, private, or philanthropic sources, leveraging the strong foundation of community engagement and the co-created vision to attract potential investment and partnerships.

4.2 Halandri Engagement Plan: steps, practices and communication

The Halandri Engagement Plan is rooted in a participatory approach that places local stakeholders at the centre of the process. Beginning with preliminary outreach, the strategy aims to build relationships with key actors, such as school staff, parent associations, municipal representatives, and community organizations. The early engagement lays the foundation for trust and collaboration. As the project progresses, stakeholders will be involved in various stages of the UCS co-design process, depending on their roles, interests, and expertise. The expected type and level of engagement for each stakeholder group may vary across the project lifecycle, including:

- **Inform – Keep Updated:** Residents, local groups and sectoral professionals will be regularly informed about project progress and key developments.
- **Consult – Gather Input and Preferences:** Discussions with educators and families can provide valuable information about the conditions and the needs of the schools. Furthermore, engagement with local CSOs, cultural associations, and environmental groups will involve collecting feedback, needs, and insights to inform project decisions.
- **Involve in UCS Co-design:** Key stakeholders like students, teachers, and parents will be engaged through thematic co-design workshops and participatory activities. COMMONSPACE together with Halandri Municipality and the selected primary schools will co-lead the design process.
- **Develop Synergies:** Institutional actors such as the Departments of Education, Urban Planning & Environmental Planning will collaborate to align regulatory, educational, and planning frameworks.

Concretely, the engagement process is structured around the following main steps.

A. Local stakeholders' outreach

The first step involves establishing strong connections with the school community, including principals, parent associations, and school staff, as well as other local actors. The preliminary outreach has started. Through meetings, events, newsletters, and online questionnaires the project team informs the local stakeholders about the objectives and the concept of urban climate shelter in schoolyards, and gathers valuable local insights. As

part of the ongoing preliminary outreach, an online survey has been launched, targeting the school community. The survey collects information on local experiences of climate risks, perceived levels of vulnerability, and interest in participating in the climate shelter co-design process. In parallel, the project has initiated a regular newsletter to ensure transparent communication, share updates, and maintain stakeholder engagement throughout the project.

B. Active involvement of key stakeholders

Following initial outreach, the goal is to actively involve the key stakeholders, namely the school principals, teachers, and parent associations. Through discussions, meetings, and targeted questionnaires, stakeholders actively participate in selecting the most suitable schools for the pilot phase. In this way, the school selection process is based on collective assessment of the needs, the challenges and the potentials of each school environment. Next, the focus shifts to engaging further the shortlist of schools, identified through the vulnerability mapping. This step is crucial for building trust with the school community and ensuring the decision reflects local priorities. Ultimately, it leads to the selection of the schoolyard for climate shelter pilot implementation and sets the foundation for an inclusive co-design process. This process began with the local kick-off event of MAINCODE in Halandri held in early June 2025. This meeting featured the first public presentation of the project to the school community, including an open discussion, a collective mapping activity, and early feedback to explore interest and expectations. More details about the local kick-off event are shared in the next chapter.

C. Engagement of schools and local actors in the climate shelter co-design process

After selecting the pilot schools, a structured co-design process will be initiated, aimed at engaging the school community and further local stakeholders in the climate shelter co-creation. Drawing on the unique knowledge, experiences, and expertise of local actors, including educators, students, parents, municipal staff, and community members, the process will be carefully planned to ensure inclusive, creative, and context-specific engagement. Prior to launching the co-design workshops, MAINCODE team will collaborate will local actors to define the content, structure, and facilitation tools best suited to the school and neighborhood context. At the workshops a variety of participatory methods and tools will be used, such as collective mapping, model-building, citizen-science tools. The purpose is to enable familiarity of students and further local groups with climate-related topics, Nature-based Solutions and the urban climate shelter concept, and to co-create meaningful proposals for the UCs in schoolyards that respond to the school's needs. The topics of these participatory sessions may include green and blue infrastructure development, shading and cooling strategies, play and learning features, participatory and inclusive design. Activities and materials will be adapted to ensure cultural sensitivity, age-appropriateness, and full accessibility, creating an inviting space for open dialogue and creative thinking. The co-design workshops will explore specific challenges, weaknesses and strengths related to the schoolyard environment, with the aim to collectively develop spatial ideas and functional solutions. This process will balance imagination with feasibility,

ensuring that the resulting concepts reflect both the everyday experience of users and the ecological goals of the UCS. Once initial ideas are developed, preliminary design concepts will be compiled and presented both online and through in-situ events, in order to gain feedback by participants, and disseminate the process and its collective outcomes in the broader local community.

D. Synergies for the pilot implementation and upscaling

To support pilot implementation and future scaling of urban climate shelter, MAINCODE sets early collaborations with the Municipality, the relevant departments and emerging local entities such as the Halandri Development Agency and Urban Lab. These partnerships are essential to integrate the climate shelter into broader urban strategies, ensuring sustainability and creating opportunities for replication across the municipality. In this context, the Green Fund of the Ministry of Environment and Energy which actively supports projects that develop and promote Nature-Based Solutions (NbS), represents a significant opportunity for securing resources and aligning urban climate shelters with national environmental and climate priorities.

4.2.1 First steps: Local kick-off event in Halandri

The local kick-off event of MAINCODE in Halandri took place on Monday, June 2nd, 2025, at the City Council Hall of the Municipality of Halandri. The event was co-organized by local project partners, COMMONSPACE and the Municipality of Halandri, and was highly successful in terms of local participation and active engagement in the UCS dialogue. Approximately **35 participants attended, the majority of whom were members of the local school community** representing 10 primary schools and 1 kindergarten within the municipality. Participants included mostly members of parent associations, some teachers and school principals, as well as representatives from the Municipality of Halandri, notably the Deputy Mayors of Environment and Education. The meeting initiated vibrant discussions and sparked strong interest of the participants, setting the stage for the upcoming outreach and co-design steps.

The purpose of this first local MAINCODE event was twofold:

- **Inform the local school community about the MAINCODE project,** its objectives, and methodology.
- **Conduct collective mapping** of climate challenges and extreme weather events in the area, as experienced and addressed by the various public primary schools of Halandri.

The event began with an introductory speech by Mr. Gerolymatos on behalf of the Municipality, followed by a presentation of the project by the COMMONSPACE team. The presentation outlined the framework, objectives, and project timeline and included references to best practices and similar completed schoolyard renovation initiatives in other

European cities[21]. Additionally, an ongoing spatial analysis of the Municipality of Halandri was presented, including built environment characteristics, information on green spaces, and climate-related data. In the second part of the event, a lively discussion took place with school community members regarding the current state of schoolyards, climate change-related challenges (especially heatwaves), and the needs of Halandri's public primary schools. The discussion started with questions about the project, implementation steps, and the timeline. Simultaneously, participants shared their views, interest in participating in the project, and their ideas, suggestions, and concerns, that are summarized in Figure 17.

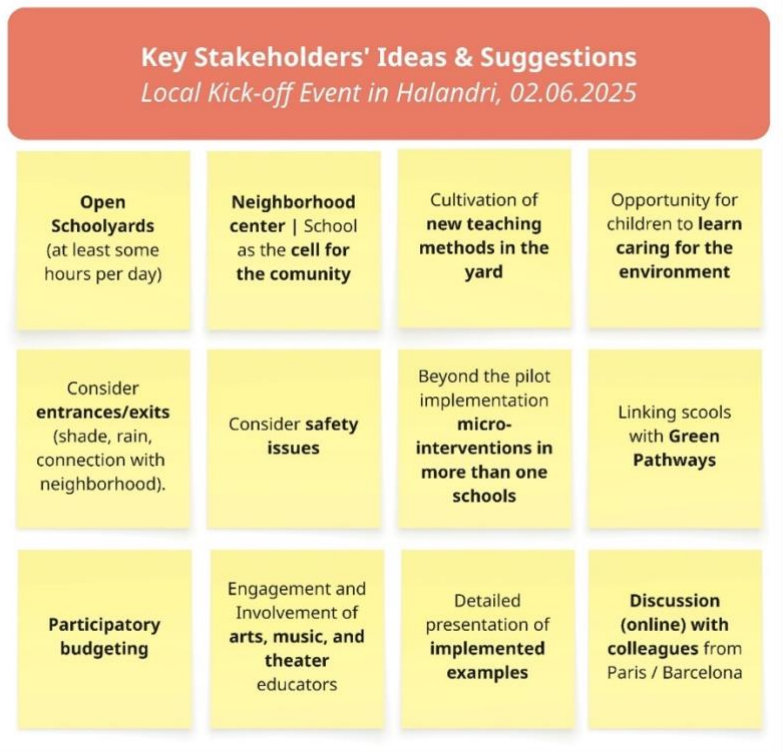


Figure 16 | Ideas and Suggestions shared by participants of the local kick-off event in Halandri, 02.06.2025 (Source: Authors elaborations)

Next, the discussion deepened into the specific challenges and characteristics of each schoolyard and its surrounding environment, and take the form of collective mapping. School community members shared details about the structure and functioning of their schoolyards, and discussed their past experiences with extreme climate events, how these manifested and how they have been handled in their schools. These insights were noted down on a map of the area showing all the public primary schools. **Key discussion topics included heatwaves, lack of greenery, and the urgent need for cooling and shading**. The map that was collectively generated during the event is presented in Figure 17. The discussion concluded with expressions of interest in participating in the project from members of the parent associations and school educational staff, positive feedback, and a renewed appointment for the upcoming school year 2025 -2026.

[21] Oasis Project in Paris and the schoolyard regeneration program of Barcelona.

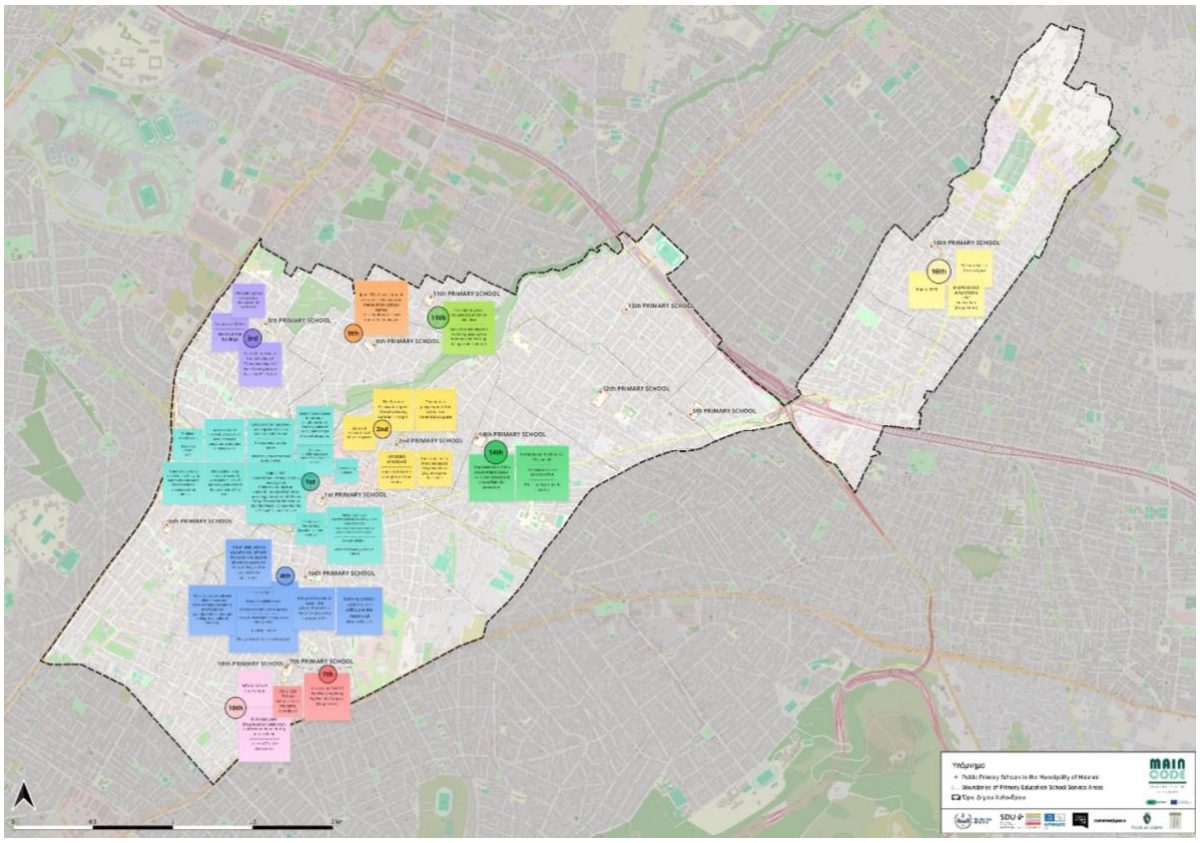


Figure 17: Outcome of the collective mapping: Primary schools' challenges in relation to heat and other extreme climate conditions. Conducted during the local kick-off event in Halandri, 02.06.2025 (Source: Authors elaborations)

Figure 18 | Results of local kick-off event in Halandri, 02.06.2025 (Source: Authors elaborations)

Figure 19 | Pictures from local kick-off event in Halandri, 02.06.2025 (Source: Authors elaboration)

5. Conclusions and Key Points

The stakeholder mapping conducted across the two cities reveals a rich and interconnected ecosystem of actors who, in different ways, contribute to the vision of climate-resilient school environments. Moving forward, it is essential to adopt a strategic and inclusive approach that values the diversity of this ecosystem and builds on the existing relationships and resources. **Next steps will be structured around three key phases: contact, engagement, and co-design**, starting by establishing or strengthening connections with all identified stakeholder groups:

- **School communities** (students, teachers, families, school managers), who must be considered as central actors and not merely as beneficiaries.
- Relevant **Turin and Halandri municipal departments**, with a particular focus on the **Department of Educational Services,** which plays a critical role in integrating climate resilience into school infrastructure and programming.
- Existing **NGOs, associations, and foundations** already active in the fields of education, social equity, or environmental sustainability.
- **Green and sustainability-related projects**, both ongoing and planned, which can serve as entry points or partners for integrated action.
- **Private entities** that, while not primarily focused on the public interest, may bring valuable resources, innovations, or co-benefits aligned with the goals of school climate shelters.

Once contact has been initiated, it is important to foster meaningful participation by creating opportunities for open dialogue and mutual learning among stakeholders. The final and most transformative phase involves co-designing interventions with stakeholders. This approach can allow solutions to reflect real needs and context-specific constraints and encourages innovative, multi-actor collaborations that are more likely to be sustainable over time. By recognizing the full ecosystem of stakeholders (from public institutions to civil society to private actors) **cities can lay the groundwork for school-based climate shelters that are not only technically effective, but also socially rooted, equitable, and long-lasting.**

As highlighted in this Report, **the methodological approach used to analyse the social actors in the two cities followed a shared path**. The uniqueness of Turin and Halandri, however, also revealed different characteristics, **leading to engagement methods that are not necessarily identical.** While Halandri has already conducted an initial kick-off event, Turin will develop its findings only after the event to be held in September at Urban Lab, which will be attended by representatives of the city and project partners.

6. References

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