

ENERGY COMMUNITY ENGAGEMENT

D6.2

DECEMBER 2024

www.energy4allproject.eu

Deliverable

Project full title	Energy as a common pool resource
Project acronym	E4A
Coordinator	Nuove Rigenerazioni (NuRiGe)
Project duration	36 months
Project website	www.energy4all-project.eu
Work package	No.6
Author(s)	Aurora Iacob (NuRiGe), Martina Lovat (Openpolis)
Contributor(s)	
Reviewer(s)	Daniela Patti (EUT), Stefaniya Hrle Aiello (EUT)
Dissemination level	Public (PU) ✓
	Confidential, only for the members of Consortium (CO)

Statement of Originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

Disclaimer

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Climate, Infrastructure and Environment Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.

Project Executive Summary

Energy4All: Energy as a common pool resource

Energy can be conceived as a public resource that should be accessible to all. The human dimension therefore plays an important role in the design and implementation of Positive Energy Districts (PEDs) and Energy Communities (ECs). In the ENERGY4ALL project, energy communities include not only a set of households producing and consuming energy, but also common users of a public resource, such as the industrial and civic sectors. By exploring different ECs elements through four pilot studies in Stavanger (Norway), Styria (Austria), Budapest (Hungary) and Rome (Italy), the project strives to provide insights into how participatory energy governance practices affect the success of PEDs/ECs.

Deliverable executive summary

This document provides an overview of the interim results on community engagement activities collected and analyzed during the first 12 months of the project. It reflects the early progress, methodologies, and insights gathered across the pilot cases, offering a preliminary understanding of how communities are being engaged in the development of Energy Communities (ECs) and Positive Energy Districts (PEDs). These findings lay the groundwork for more comprehensive analysis, which will be presented in the final deliverable 6.2 scheduled for release at month 24 of the project. That upcoming deliverable will include a full evaluation of community engagement strategies, their effectiveness, and the lessons learned, providing a deeper understanding of their impact across different national and local contexts.

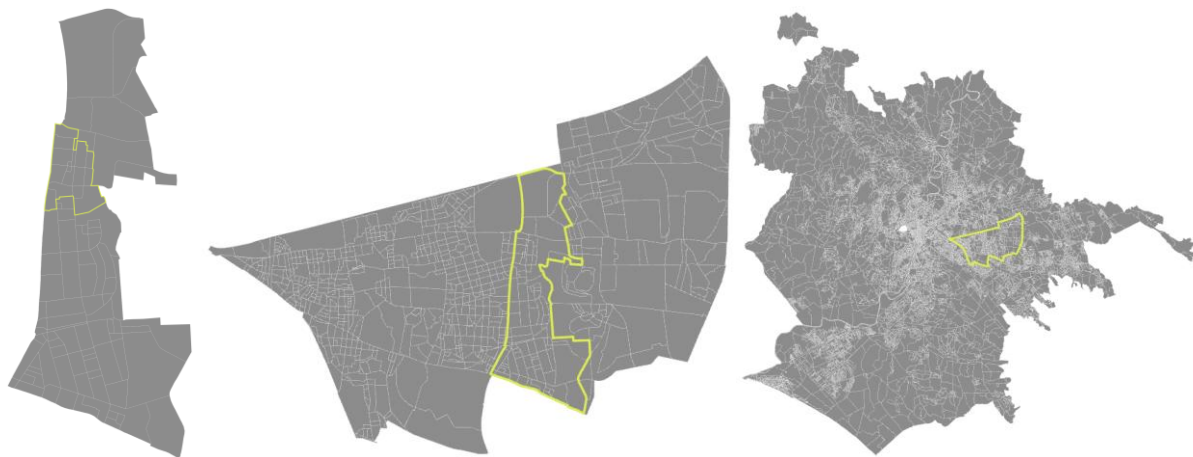
Quarticciolo's energy community aims to create a resilient network to address energy poverty by providing sustainable and affordable energy solutions for its residents. By promoting collective action, this initiative seeks to strengthen the environmental and social power of the inhabitants, promoting sustainable practices and community solidarity. In addition, the community will play a key role in identifying gaps in current legislation, using their insights to produce informed recommendations for policy-makers, thus driving legislative improvements that support the wider adoption of community energy solutions.

Table of contents

1. The community	6
1.1 Social and environmental context.....	7
1.2 Stakeholder targeting.....	8
1.3 Key roles and interactions	9
2. Creating the energy community	11
2.1 Energy community engagement activities	12
2.2 Complementing activities	13
3. Challenges, difficulties and gaps	16
4. Further directions and actions	17
5. References	17
6. Figures and Tables	18

1. The community

The Quarticciolo area is located within the Alessandrino urbanistic zone. This area is included in Municipality V, located in the southeastern part of Rome. In this area there will be an energy community linked to an installation of solar panels over some rooftops. This area is not an administrative sub-municipal level such as Municipality V but it's a neighborhood. Born officially as a *borgata* between the years 1939 and 1940, Quarticciolo's urbanistic planning was conceptualized by the IFACP (*Istituto Fascista Autonomo Case Popolari*, translated in Fascist Autonomous Institute of Public Housing)¹. Up to this day, it is an area mainly composed of social housing buildings. In Quarticciolo neighbourhood, inhabitants are generally facing struggles from an economic point of view as shown by low employment and low education level, two indicators that strongly relate to poverty². As further analysis will emphasize, this is definitely a critical issue for the solar power installation as it can't be done on public housing buildings. But in order to mitigate those social issues, a strong neighborhood committee has been formed in recent years. This is a key point for the energy community and social engagement of Quarticciolo inhabitants.



Figures 1 to 3: location of Quarticciolo in Alessandrino, Alessandrino in Municipio V and Municipio V in the city of Rome (maps made by Openpolis and Pietro Vicari on Istat census areas 2021)

¹ Cianfarani, Francesco and Luca Porqueddu. "[La borgata Quarticciolo nel processo di costruzione della periferia romana](#)" in *Studi sulla periferia est di Roma*, edited by Giuseppe Strappa, 109-119, FrancoAngeli, 2012.

² Selvitopu, Abdullah and Metin Kaya. "[A Meta-Analytic Review of the Effect of Socioeconomic Status on Academic Performance](#)". *Journal of Education*, no. 203 (October 2023): 768–780. <https://doi.org/10.1177/00220574211031978>.

1.1 Social and environmental context

According to the 2021 Istat census³ 3,818 residents lived in the Quarticciolo area. Most of the population is aged between 15 and 64 years (in absolute terms, 2,327 individuals). There are 454 residents under the age of 15 and 1,038 over 65.

Considering the socioeconomic context, Quarticciolo is marked by specific challenges. The examination of educational attainment shows that the majority of residents report a middle school diploma as their highest qualification (34.2%). Another 31.8% hold a secondary school diploma, 18% have completed primary education, and 3.8% have no formal qualification. University graduates make up 6.5% of the resident population. This figure is particularly low compared to the surrounding urban area: in Alessandrino, 14.2% of residents hold a university degree. Data are lower also in comparison to Municipality V (18.3%) and the entire municipality of Rome (23.8%), with a difference of approximately 17 percentage points compared to the citywide average. Regarding employment, there are 1,249 employed residents. They represent nearly one-third of the total population (32.7%) and 53.7% of those aged between 15 and 64 years. This latter figure can be compared to other sub-municipal levels and the municipal average. In the Alessandrino urban zone, 61% of the age group is employed, while Municipality V reports 62.9%, and the overall city average is 62.4%. The Quarticciolo area reports a rate 7 to 8 percentage points lower than the other areas considered.

But this area is not characterized only by social challenges. The rate of unemployment and low education level reflect on poverty issues that are highlighted by the neighborhood committee Quarticciolo Ribelle⁴ and can be exacerbated by specific environmental concerns of the area. One of the main ones is related to urban heat islands. This is one of the more densely built-up areas of Rome. During summer months, these areas, compared to rural areas exhibit a significant temperature difference⁵. In order to capture this phenomenon, Mapparoma has calculated an Urban Heat Island Intensity (UHII) index. This index measures the difference between the average, maximum, or minimum temperatures. These temperatures are recorded by microclimate stations within the city and compared to those recorded by a reference rural station that is located near Fiumicino airport. These calculations reveal that, in the summer of 2020, the central areas and the southeastern quadrant of the city were most affected by this phenomenon during daytime hours. A large portion of the urban zones in Municipality V recorded particularly high values compared to other areas. Specifically, the Alessandrino zone showed a daytime UHII index 3.15°C higher than the reference rural area. This phenomenon is directly linked to land

³ Openpolis calculations based on Istat data on census areas ([Istat - dati per sezione di censimento al 2021](#))

⁴ Davoli, Chiara et al. “[La solidarietà contro l’esclusione. Il caso del «Comitato di quartiere Quarticciolo» a Roma](#)” in *Italian Journal of Social Policy*, no. 2 (2020): 93-108.

⁵ Asdrubali, Francesco et al. “#mapparoma36 - Quanto fa caldo nei quartieri di Roma?”. Mapparoma. 2022. <https://www.mapparoma.info/mappe/mapparoma36-quanto-fa-caldo-nei-quartieri-di-roma/>.

consumption, a critical issue for both the city and Municipality V. According to analyses by Roma Capitale and ISPRA⁶, in 2021 the percentage of artificially covered land stood at 64.16%, making it the third municipality in terms of incidence. In absolute terms, this amounts to 1,727 hectares.

1.2 Stakeholder targeting

There can be several stakeholders that could be interested in the Quarticciolo case. They are shown in figure 4.

It is possible to divide all the stakeholders into four main categories:

- public administration sector, that has interests in boosting the economic wellbeing of the area in order to avoid arrears by the social housing inhabitants. In detail, the main actors are:
 - Municipality of Rome;
 - Municipality V Institution;
 - ATER (*Aziende Territoriali Edilizia Residenziale*), the public body that has the role to manage public housing in Rome.
- research institutes that can be interested in a case where there is a strong sense of community that has been developed through the difficulties that the inhabitants have faced. In detail, the main actors are:
 - La Sapienza Università di Roma, one of the main public university institutions that operates in the city of Rome;
 - Openpolis, a non-profit foundation that operates on transparency of data and awareness of social and political issues;
 - Nuove Rigenerazioni (NuRiGe), an association that deals with urban regeneration and interventions in neighbourhoods subject to degradation and distress;
 - Tecnologie Solidali, which is also a NPO that aims to boost sustainable development and renewable energy in specific communities.
- civilian population, directly interested in their wellbeing and in their future:
 - inhabitants of Quarticciolo;
 - the Quarticciolo Ribelle association that aims to connect the population and give specific
- private sector actors that have developed in Quarticciolo neighbourhood that have an interest on long-term stability of their activities and could benefit from the reduction in energy costs:
 - public gym;
 - people's health clinic;

⁶ Giorgini, Diego et al. [L'uso e il consumo di suolo di Roma Capitale: analisi della copertura del suolo nel territorio di Roma](#). 2021.

- local small entrepreneurs such as the local bakery, the restaurants and the small shops that operate in Quarticciolo neighbourhood.

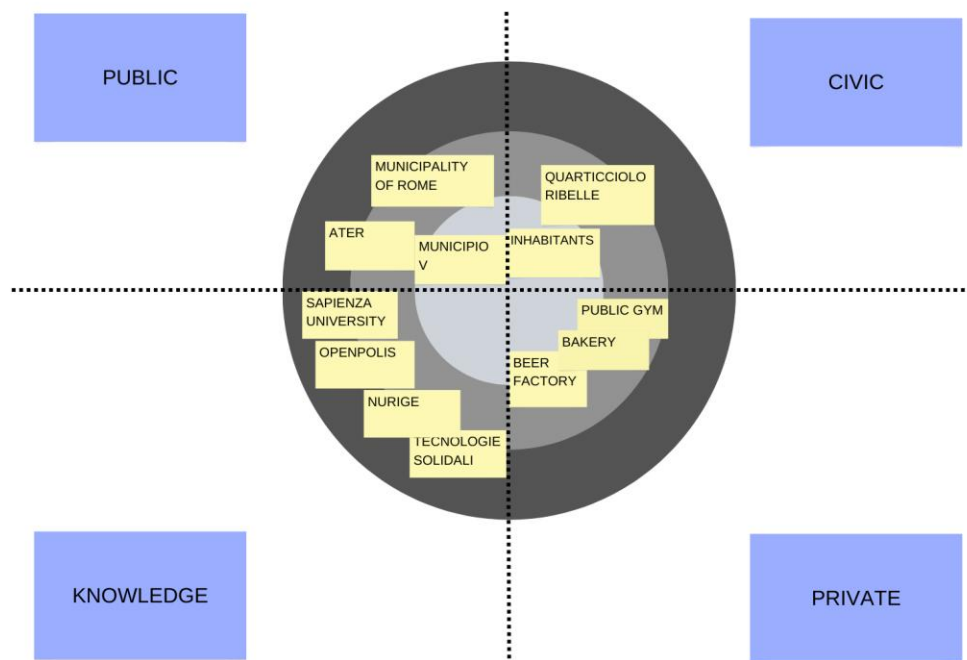


Figure 4: Relevant Stakeholders and their level of involvement in the CER Quarticciolo

1.3 Key roles and interactions

It is clear from the previous analysis that the role of institutions is crucial to carry out projects such as this one. In this case we have to interface with the town hall and the city hall, which play a fundamental role. In particular, due to the presence of several social housing buildings, the Italian members of this partnership are working closely with these institutions. The neighborhood committee has been actively trying to ask for negotiation tables that would secure structural works for the buildings and investments that could improve the area⁷. Even though the dialogue with Municipio V Institutions is stable, the desired outcomes have not been achieved yet. While lines

⁷ Argenti, Giulia. "“Ater e municipio hanno abbandonato il Quarticciolo”. I residenti lanciano la protesta”. *RomaToday*, October 24, 2024. <https://www.romatoday.it/politica/quarticciolo-sit-in-residenti-via-torre-annunziata-28-ottobre.html>



of communication with local authorities are being kept, tangible results in terms of the funding and interventions have not been seen.

Among the key stakeholders, there are also academic institutions such as local universities, along with associations like Eutropian and Openpolis, that focus on research and studies related to urban regeneration in the neighborhood. These organizations bring valuable expertise in understanding the dynamics of urban development, social challenges, and innovative solutions that can be applied to improve the living conditions in Quarticciolo and similar areas.

For Quarticciolo, the role of the community has been absolutely fundamental and has been at the core of the work carried out in the area over the years. Faced with numerous challenges, it has often been the residents themselves who have found and applied solutions to improve life in the neighborhood. This grassroots approach has led to the creation of a series of initiatives and experiences that today constitute the strength of Quarticciolo and serve as a model for other neighborhoods.

One of the key aspects of this community-driven change is the strong sense of solidarity and mutual support that exists among the residents. In a neighborhood where economic hardships are common, and where access to public services and infrastructure has historically been limited, the community has taken matters into its own hands. This collective effort has led to the development of a range of social initiatives, from local food banks and community gardens to informal networks of assistance for families in need.

Over the years, realities have been born that have tried to give a response aimed especially at the youth part of the neighborhood to try to intervene in situations of school dropout or approaching illegal activities. Among these definitely to be named are the community gym, after-school. But also activities aimed at the collective well-being such as the community clinic or commercial activities such as the bakery or brewery.

however, to carry out projects like these, an economic basis is needed especially at a time when, as we said at the beginning, dialogue with institutions is not always effective and leads to results. For this reason the social realities of the land referred to above appeal to associations such as Charlemagne. It is an independent foundation that grants funds to projects on request to actively support individual experiences, to create a sustainable non-profit ecosystem and a strategic partnership system. It was Charlemagne who decided to fund solar panels for the energy community.



*Figure 5: a lesson in the community gym
(Source: instagram profile palestrapopolarequarticciolo, photo published on the 20th of June 2024)*



Figure 6: day of medical visits at the clinic (Source: instagram profile quarticcioloribelle, photo published on the 8th of June in 2024)

2. Creating the energy community

The energy community of Quarticciolo aims to create a resilient network to tackle energy poverty, providing affordable and sustainable energy solutions to its residents. By fostering collective

action, this initiative seeks to strengthen the environmental and social empowerment of the inhabitants, promoting sustainable practices and community solidarity. Additionally, the community will play a critical role in identifying gaps in current legislation, leveraging their insights to produce informed recommendations for policymakers, thereby driving legislative improvements that support broader adoption of community-based energy solutions.

2.1 Energy community engagement activities

In order to build engagement in the inhabitants, it is crucial to boost coordination within the partners. The capacity-building formula seemed the best viable option in order to achieve the long-term goal of increasing awareness of the community.

The first capacity-building session was held on December 10th at Eutropian's office in San Lorenzo, with the participation of all project partners, including Quarticciolo Ribelle, Openpolis, Tecnologie Solidali, Eutropian, and NuoveRigenerazioni.

The session began with an introduction made by Andrea Micangeli of Tecnologie Solidali. He explained the main definitions and showed different types of energy communities. This lecture sparked a discussion about how resource availability varies across regions. This analysis is crucial for determining the most suitable, functional, and productive model for each community. Several examples were shared, including case studies of water-based energy communities in Central America. This discussion highlighted that Quarticciolo's main resource is solar energy, and the focus then shifted to photovoltaic panels, commonly known as solar panels. These panels contain photovoltaic cells made of semiconductors like silicon, which absorb sunlight and convert it into electricity. Andrea explained the advantages of these panels and how they could provide a real and tangible solution to the energy poverty experienced in the Quarticciolo neighborhood.

This capacity-building session proved to be an excellent opportunity for discussion, debate, and exchange. It helped the entire team gaining a deeper understanding of the functioning of energy communities and developing the further steps of the project. Further capacity-building sessions will be conducted in the next few months.



Figure 7: photo taken by Aurora Iacob (NuRige) during the first capacity-building session

2.2 Complementing activities

In the Italian context, an energy community is not only related to economic and environmental aspects. It usually stems from a social community that has a strong sense of cohesion.

So, in these cases, renewable energy projects include technical solutions to economic and social issues. They represent a shared identity and collective progress. .

Quarticciolo, as the Italian pilot in the Energy4All project, is a prime example of this dynamic. This neighborhood embodies the very essence of community-led initiatives, where local identity and heritage serve as the foundation for building an energy community. Quarticciolo's history of social deprivation and housing struggles has fostered a strong sense of solidarity and a unique cultural identity.

Because the Quarticciolo is rich in social realities, it is often involved in activities and projects involving the community, precisely because the inhabitants are at the centre of this experiment. Activities are designed to reach all target groups, from the elderly to the young.

There is no lack of pure service activities such as the community clinic which organizes days of free medical visits, responding to a lack of services from the public health sector. There are also many cultural activities such as the after-school school. It has the aim of reducing the rate of school drop-out and give to the children of Quarticciolo the opportunity to be in an environment protected by

criminality. Another facility that can be found in the Quarticciolo area is the popular gym. It has become an essential meeting point for boys and girls of the area. In the gym, the most popular sport is boxing. Through workouts and competitions, the young people learn respect for themselves and for others. There is also the library-theatre which hosts workshops for young people, but also shows, conferences and exhibitions.

There are often neighbourhood parties, where people get together. These occasions are also important for the population to educate themselves through debates. For instance, a neighbourhood initiative has been organized on the 28th of September. During the day, several laboratories and activities have been made in order to celebrate the eighth year of the gym. During the day, several roundtables have been organized in order to discuss the following steps for the projects inside the neighbourhood. There has also been a discussion on the situation on Palestine, followed by the projection of the documentary *Diritti contro il cielo* (translated, “rights against the sky”).



Figure 8: a cineforum with inhabitants, photo taken by Stefaniya Hrle Aiello in September 2024



Figure 9: debate on new art forms, (Source: instagram profile quarticcioloribelle, photo published on the 11 of June 2024)

3. Challenges, difficulties and gaps

There are three main challenges in the Italian pilot: the first one is the access to financial resources for the installation of the solar panels. Since the call for proposals has been presented, the funds of the project never arrived, the explanation given is that there is a communication problem between the ministries involved and this has caused a serious slowdown. In this first year it was crucial to search for economic support from other sources. We were able to get in touch with Charlemagne, already mentioned among the stakeholders, who has given availability to finance solar panels to be installed on top of the popular gym. This clearly cannot be the solution, without the funds of the ministry we are in great difficulty to realize a project and a community that are really effective and useful for the inhabitants of the neighborhood. That's why we keep demanding the funds to come, for now we are completing the bureaucratic procedure as requested pending updates.

Secondly, there are frictions difficult to overcome in order to establish a solid collaboration with local public administration; Quarticciolo in fact has been asking for structural interventions for several properties: the football pitch, the playground, the swimming pool, two buildings of public

housing from which over the last five years have been reported more than four thousand repair requests. The answers are difficult to get, with the Ater the trading tables at this time are closed and in previous years have not led to concrete results. With the Municipality V and the city administration, the dialogue is more open. Municipality V proposed in fact to create a working team that brings together both institutions and activists in order to plan which interventions should be carried out in the neighbourhood. However, the idea was not put into practice due to new directives of the Government that wants to apply a series of measures on the Quarticciolo (known in Italy as *modello Caivano*⁸) and that could therefore block the work carried out so far.

The last challenge is linked with the inhabitants' perception. These people feel abandoned by the local authorities and feel like B-series citizens. So, they feel like there is no possibility of change and improvement in their social wellbeing.

4. Further directions and actions

In the next months, our main objective is to receive funds from the Ministry so that we can carry out our activities regularly and fully without having to constantly seek associations and organizations for parallel financial support.

The installation of photovoltaic panels should start soon. Testing is underway to determine whether the panels can be installed above the gym. This would mark the proper starting point of the energy community. While the technical aspects will be considered, it is crucial to continue working with the community. A public assembly has already been planned for the 22th of February in order to discuss the social and economic aspects of the energy community. Further workshops and discussions with the population will be planned.

It is also important to plan the legal form of the energy community. In order to do that, there will be discussions carried within the partners but also with the local community.

⁸ de Ghantuz Cubbe, Marina. "Il Quarticciolo come Caivano: "No alla militarizzazione"". *La Repubblica*, December 14, 2024, https://roma.repubblica.it/cronaca/2025/01/08/news/quarticciolo_decreto_caivano-423925480/

5. References

1. Cianfarani, Francesco and Porqueddu, Luca. “[La borgata Quarticciolo nel processo di costruzione della periferia romana](#)” in *Studi sulla periferia est di Roma*, edited by Giuseppe Strappa, 109-119, FrancoAngeli, 2012.
2. Selvitopu, Abdullah and Metin Kaya. “[A Meta-Analytic Review of the Effect of Socioeconomic Status on Academic Performance](#)”. *Journal of Education*, no. 203 (October 2023): 768–780. <https://doi.org/10.1177/00220574211031978>.
3. Openpolis calculations based on Istat data on census areas ([Istat - dati per sezione di censimento al 2021](#))
4. Davoli, Chiara Pontoriero, Alessia and Vicari, Pietro “[La solidarietà contro l’esclusione. Il caso del «Comitato di quartiere Quarticciolo» a Roma](#)” in *Italian Journal of Social Policy*, no. 2 (2020): 93-108.
5. Asdrubali, Francesco, Ketil Lelo, Salvatore Monni, et al. “[#mapparoma36 - Quanto fa caldo nei quartieri di Roma?](#)”. Mapparoma. 2022. <https://www.mapparoma.info/mappe/mapparoma36-quanto-fa-caldo-nei-quartieri-di-roma/>.
6. Giorgini, Diego, Elisa Gianvenuti, Giacomo Ruzzolini et al. [L’uso e il consumo di suolo di Roma Capitale: analisi della copertura del suolo nel territorio di Roma](#). 2021.
7. Argenti, Giulia. ““Ater e municipio hanno abbandonato il Quarticciolo”. I residenti lanciano la protesta”. *RomaToday*, October 24, 2024. <https://www.romatoday.it/politica/quarticciolo-sit-in-residenti-via-torre-annunziata-28-ottobre.html>
8. de Ghantuz Cubbe, Marina. “Il Quarticciolo come Caivano: “No alla militarizzazione””. *La Repubblica*, December 14, 2024, https://roma.repubblica.it/cronaca/2025/01/08/news/quarticciolo_decreto_caivano-423925480/

6. Figures and Tables

Figures 1 to 3: location of Quarticciolo in Alessandrino, Alessandrino in Municipio V and Municipio V in the city of Rome (maps made by Openpolis and Pietro Vicari on Istat census areas 2021)

Figure 4: Relevant Stakeholders and their level of involvement in the CER Quarticciolo

Figure 5: a lesson in the community gym (Source: instagram profile palestrapopolarequarticciolo, photo published on the 20th of June 2024)

Figure 6: day of medical visits at the clinic (Source: instagram profile quarticcioloribelle, photo published on the 8th of June in 2024)

Figure 7: photo taken by Aurora Iacob during the first capacity-building session

Figure 8: a cineforum with inhabitants, photo taken by Stefaniya Hrle Aiello in September 2024

Figure 9: debate on new art forms (Source: instagram profile quarticcioloribelle, photo published on the 11 of June 2024)